RF TEST REPORT

Applicant	Qboid,Inc.
FCC ID	2AYQM-M2W01
Product	Handheld 3D Dimensioning Terminal
Brand	Qboid
Model	Perceptor M2
Report No.	R2111A0948-R3V2
Issue Date	March 7, 2022

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 15E (2020)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Prepared by: Peng Tao *Approved by: Kai Xu*

TA Technology (Shanghai) Co., Ltd.

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TABLE OF CONTENT

Version	Revision description	Issue Date
Rev.0	Initial issue of report.	February 9, 2022
Rev.1	Update describe and information.	March 4, 2022
Rev.2	Update description.	March 7, 2022
Note: This revised report (Report No. R2111A0948-R3V2) supersedes and replaces the previously issued report (Report No. R2111A0948-R3V1). Please discard or destroy the previously issued report and dispose of it accordingly.		

Summary of measurement results

Number	Test Case	Clause in FCC rules	Verdict
1	Average output power	15.407(a)	PASS
2	Occupied bandwidth	15.407(e)	PASS
3	Frequency stability	15.407(g)	PASS
4	Power spectral density	15.407(a)	PASS
5	Unwanted Emissions	15.407(b)	PASS
6	Conducted Emissions	15.207	PASS
Date of Testing: December 15, 2021 and January 25, 2022 Date of Sample Received: November 19, 2021			
Note: PASS: The EUT complies with the essential requirements in the standard. FAIL: The EUT does not comply with the essential requirements in the standard. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

1. Test Laboratory

1.1. Notes of the test report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

1.3. Testing Location

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City:	Shanghai
Post code:	201201
Country:	P. R. China
Contact:	Xu Kai
Telephone:	+86-021-50791141/2/3
Fax:	+86-021-50791141/2/3-8000
Website:	http://www.ta-shanghai.com
E-mail:	xukai@ta-shanghai.com

2. General Description of Equipment under Test

2.1. Applicant and Manufacturer Information

Applicant	Qboid,Inc.
Applicant address	118 Charcot Ave, San Jose, CA, 95131
Manufacturer	Nantong Kefei Technology Co., Ltd.
Manufacturer address	Room 1604，Building 8, Xinghu 101 Square，Nantong Economic and Technological Development Zone

2.2. General information

EUT Description			
Model	Perceptor M2		
SN	FH04021A1900003		
Hardware Version	V1.1		
Software Version	V1.16		
Power Supply	Battery / AC adapter		
Antenna Type	Internal Antenna		
Antenna Gain	Frequency	Antenna 1 Gain (dBi)	Antenna 2 Gain (dBi)
	5150MHz-5250MHz	3.2	4.0
	5250MHz-5350MHz	3.2	4.0
	5470MHz-5725MHz	3.6	4.0
	5725MHz-5850MHz	3.6	4.0
Directional Gain	5150MHz-5250MHz 5250MHz-5350MHz	3.6 dBi	
	5470MHz-5725MHz 5725MHz-5850MHz	3.8 dBi	
Operating Frequency Range(s)	U-NII-1: 5150MHz-5250MHz U-NII-2A:5250MHz -5350MHz U-NII-2C: 5470MHz-5600MHz ,5650MHz-5725MHz U-NII-3: 5725MHz -5850MHz		
Modulation Type	802.11a/n (HT20/HT40) : OFDM 802.11ac (VHT20/VHT40/VHT80): OFDM		
Max. Conducted Power	18.59dBm		
Testing temperature range:	-20 ° C to 50° C		
Operating temperature range:	-10 ° C to 50° C		
Operating voltage range:	3.6V to 4.2V		
State DC voltage:	3.8V		

EUT Accessory	
Adapter	Manufacturer: Shenzhen Tianyin Electronics CO.,LTD. Model: TPA-10R120150UU01HS
Battery	Manufacturer: Jiade Energy Technology (Zhuhai) Co., Ltd. Model: FH04(JKSG)
Earphone	Manufacturer: SUZHOU KELI SCIENCE&TECHNOLOGY DEVELOPMENT CO.,LTD. Model: KLC-5243
Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant. 2. This device support automatically discontinue transmission, while the device is not transmitting any information, the device can automatically discontinue transmission and become standby mode for power saving. The device can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.	

3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC CFR47 Part 15E (2020) Unlicensed National Information Infrastructure Devices

ANSI C63.10 (2013)

Reference standard:

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

4. Test Configuration

Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the worst case was recorded.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate. Preliminary tests have been done on all the configuration for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case data rates are shown as following table.

Mode	Data Rate		
	Antenna 1	Antenna 2	MIMO
802.11a	6 Mbps	6 Mbps	/
802.11n HT20	MCS0	MCS0	MCS8
802.11n HT40	MCS0	MCS0	MCS8
802.11ac VHT20	MCS0	MCS0	MCS0
802.11ac VHT40	MCS0	MCS0	MCS0

The worst case Antenna mode for each of the following tests for Wi-Fi:

Test Cases	Antenna 1	Antenna 2	MIMO
Average conducted output power	O	O	O
Occupied bandwidth	--	--	O
Frequency stability	--	--	802.11a
Power Spectral Density	O	O	O
Unwanted Emissions	--	--	O
Conducted Emissions	--	--	O
Note：“O”: test all bands			

According to RF Output power results in chapter 5.2, MIMO was selected as the worst antenna .

Wireless Technology and Frequency Range

Wireless Technology		Bandwidth	Channel	Frequency
Wi-Fi	U-NII-1	20 MHz	36	5180MHz
			40	5200MHz
			44	5220MHz
			48	5240MHz
		40 MHz	38	5190MHz
			46	5230MHz
		80 MHz	42	5210MHz
	U-NII-2A	20 MHz	52	5260MHz
			56	5280MHz
			60	5300MHz
			64	5320MHz
		40 MHz	54	5270MHz
			62	5310MHz
	U-NII-2C	20 MHz	100	5500MHz
			104	5520MHz
			108	5540MHz
			112	5560MHz
			116	5580MHz
			132	5660MHz
			136	5680MHz
			140	5700MHz
		40 MHz	102	5510MHz
			110	5550MHz
			118	5590MHz
			134	5670MHz
			142	5710MHz
	U-NII-3	20 MHz	149	5745MHz
			153	5765MHz
			157	5785MHz
			161	5805MHz
			165	5825MHz
		40 MHz	151	5755MHz
			159	5795MHz
Does this device support TPC Function? ☐Yes ☒No				
Does this device support TDWR Band? ☐Yes ☒No				

5. Test Case Results

5.1. Occupied Bandwidth

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

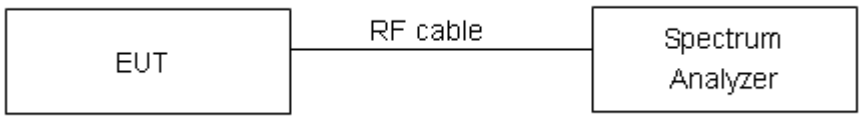
For U-NII-1/U-NII-2A/U-NII-2C, set RBW ≈1% OCB kHz, VBW ≥ 3 × RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.

For U-NII-3, Set RBW = 100 kHz, VBW ≥ 3 × RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

Use the 99 % power bandwidth function of the instrument

Test Setup



Limits

Rule FCC Part §15.407(e)

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 936 Hz.

Test Results:

U-NII-1

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5180	16.57	21.93	PASS
	5200	16.60	23.04	PASS
	5240	16.56	22.77	PASS
802.11n HT20	5180	17.77	21.90	PASS
	5200	17.76	23.50	PASS
	5240	17.78	22.51	PASS
802.11n HT40	5190	36.31	40.96	PASS
	5230	36.20	41.63	PASS
802.11ac VHT20	5180	17.76	23.40	PASS
	5200	17.75	22.64	PASS
	5240	17.75	21.94	PASS
802.11ac VHT40	5190	36.26	40.69	PASS
	5230	36.28	41.17	PASS

U-NII-2A

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5260	16.58	23.67	PASS
	5300	16.57	22.35	PASS
	5320	16.55	22.10	PASS
802.11n HT20	5260	17.77	22.41	PASS
	5300	17.77	22.97	PASS
	5320	17.77	23.28	PASS
802.11n HT40	5270	36.30	41.38	PASS
	5310	36.28	41.27	PASS
802.11ac VHT20	5260	17.76	23.03	PASS
	5300	17.78	23.53	PASS
	5320	17.77	24.02	PASS
802.11ac VHT40	5270	36.29	41.13	PASS
	5310	36.29	41.99	PASS

U-NII-2C

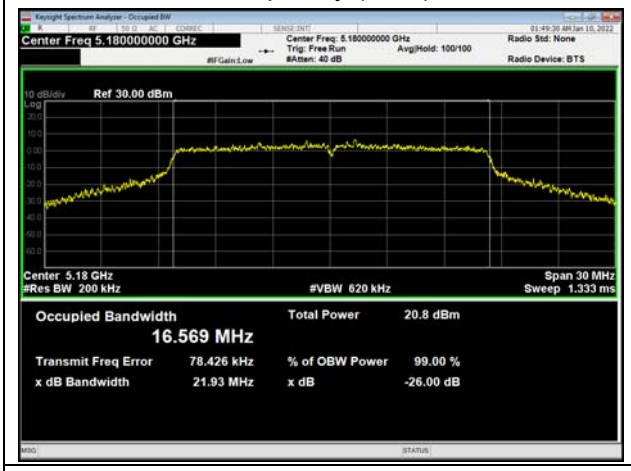
Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5500	16.57	22.03	PASS
	5580	16.57	22.04	PASS
	5700	16.57	22.22	PASS
	5720	16.58	22.33	PASS
802.11n HT20	5500	17.75	24.51	PASS
	5580	17.77	22.79	PASS
	5700	17.76	22.85	PASS
	5720	17.78	23.30	PASS
802.11n HT40	5510	36.31	41.29	PASS
	5550	36.29	41.10	PASS
	5670	36.24	40.85	PASS
	5710	36.28	41.33	PASS
802.11ac VHT20	5500	17.71	23.26	PASS
	5580	17.76	23.22	PASS
	5700	17.77	22.83	PASS
	5720	17.80	23.69	PASS
802.11ac VHT40	5510	36.23	41.25	PASS
	5550	36.19	41.56	PASS
	5670	36.29	41.43	PASS
	5710	36.25	40.98	PASS

U-NII-3

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 6 dB bandwidth (MHz)	Limit (kHz)	Conclusion
802.11a	5745	16.59	16.27	500	PASS
	5785	16.55	15.28	500	PASS
	5825	16.61	16.04	500	PASS
802.11n HT20	5745	17.75	16.54	500	PASS
	5785	17.76	15.05	500	PASS
	5825	17.78	17.29	500	PASS
802.11n HT40	5755	36.30	35.87	500	PASS
	5795	36.23	36.17	500	PASS
802.11ac VHT20	5745	17.79	17.33	500	PASS
	5785	17.73	17.38	500	PASS
	5825	17.75	17.26	500	PASS
802.11ac VHT40	5755	36.31	35.62	500	PASS
	5795	36.22	35.49	500	PASS

U-NII-1, 802.11a

Carrier frequency (MHz): 5180

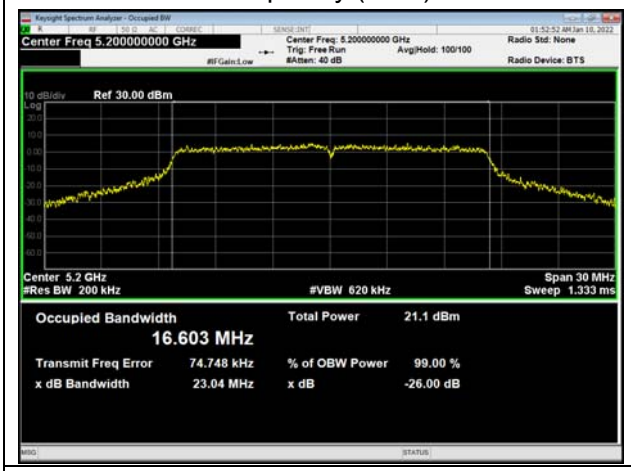


U-NII-1, 802.11n HT20

Carrier frequency (MHz): 5180

U-NII-1, 802.11a

Carrier frequency (MHz): 5200

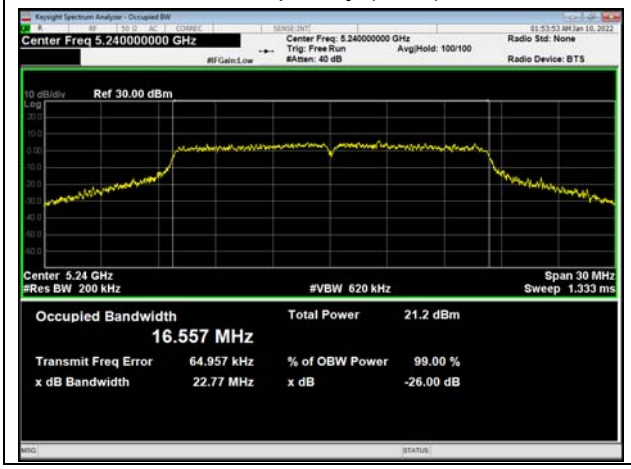


U-NII-1, 802.11n HT20

Carrier frequency (MHz): 5200

U-NII-1, 802.11a

Carrier frequency (MHz):5240



U-NII-1, 802.11n HT20

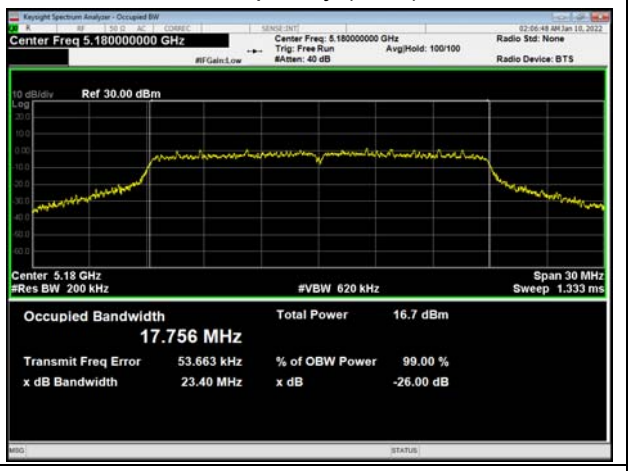
Carrier frequency (MHz):5240

U-NII-1, 802.11n HT40

Carrier frequency (MHz): 5190

U-NII-1, 802.11ac VHT20

Carrier frequency (MHz): 5180



U-NII-1, 802.11n HT40

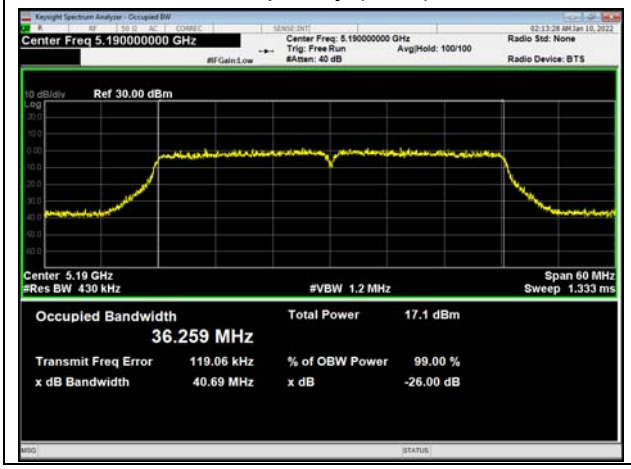
Carrier frequency (MHz): 5230

U-NII-1, 802.11ac VHT20

Carrier frequency (MHz): 5200

U-NII-1, 802.11ac VHT40

Carrier frequency (MHz): 5190



U-NII-1, 802.11ac VHT20

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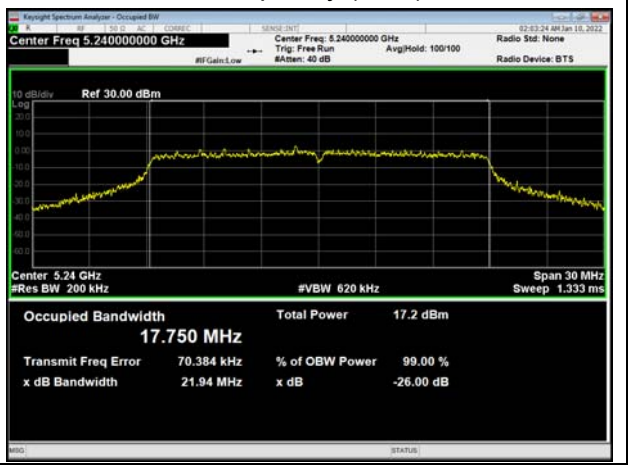
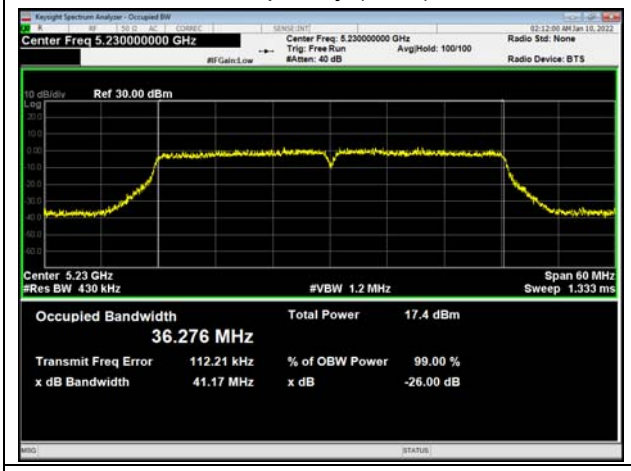


U-NII-1, 802.11ac VHT40

Carrier frequency (MHz): 5230

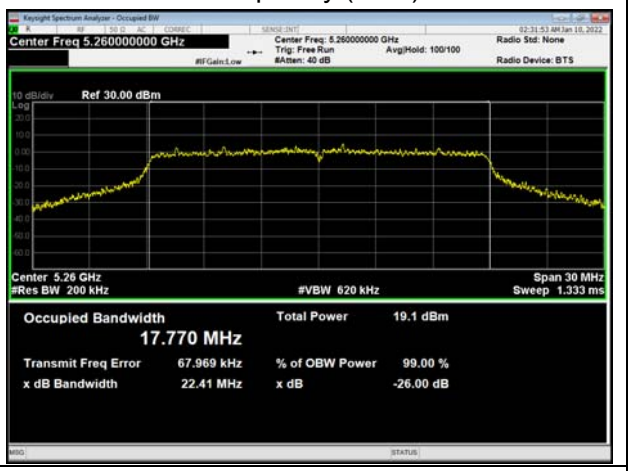


U-NII-2A, 802.11a

Carrier frequency (MHz): 5260

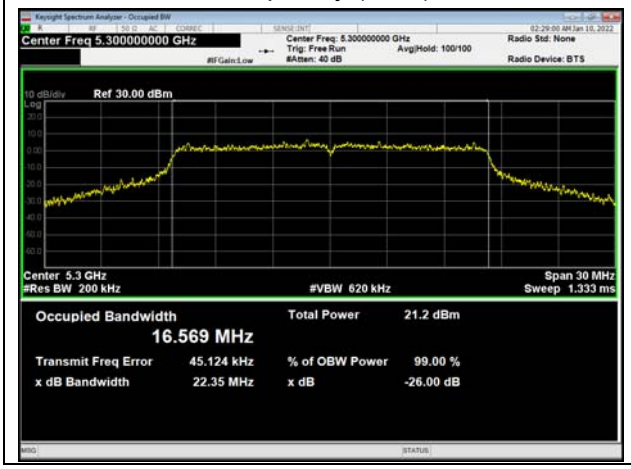
U-NII-2A, 802.11n HT20

Carrier frequency (MHz): 5260



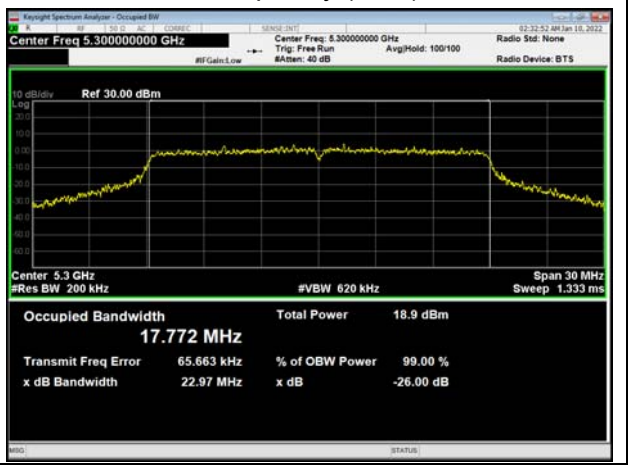
U-NII-2A, 802.11a

Carrier frequency (MHz): 5300



U-NII-2A, 802.11n HT20

Carrier frequency (MHz): 5300

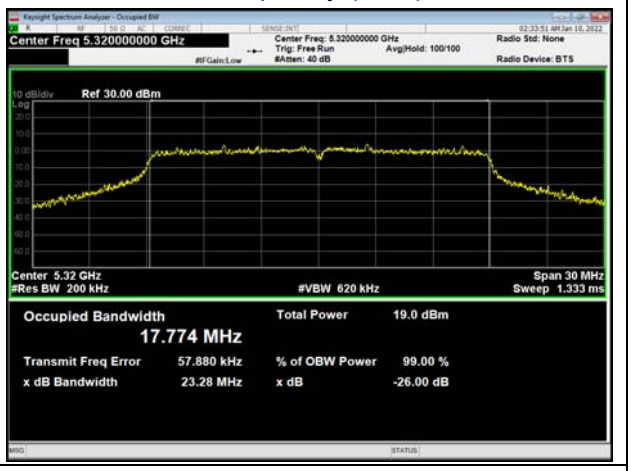


U-NII-2A, 802.11a

Carrier frequency (MHz):5320

U-NII-2A, 802.11n HT20

Carrier frequency (MHz):5320

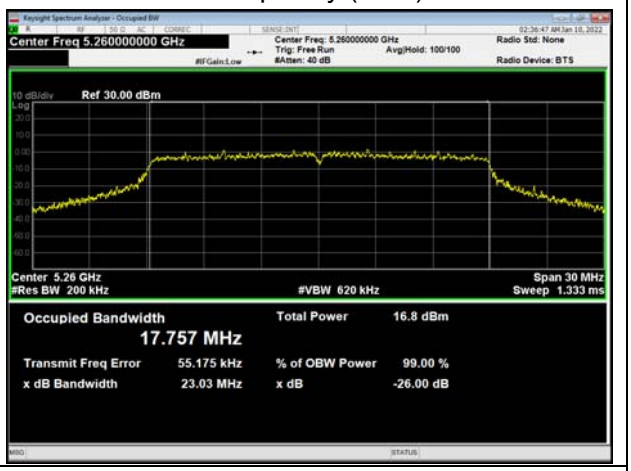


U-NII-2A, 802.11n HT40

Carrier frequency (MHz): 5270

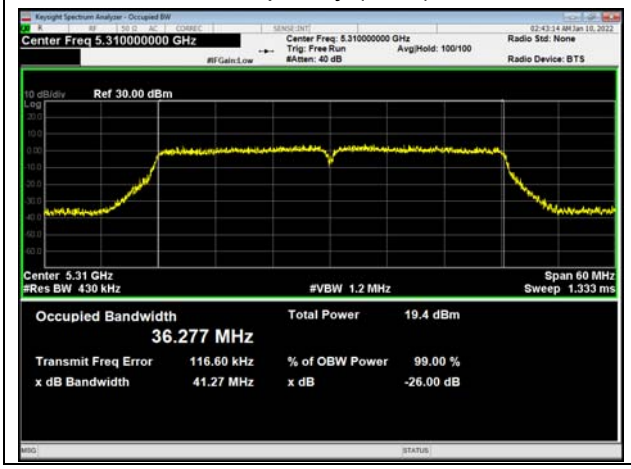
U-NII-2A, 802.11ac VHT20

Carrier frequency (MHz):5260



U-NII-2A, 802.11n HT40

Carrier frequency (MHz): 5310

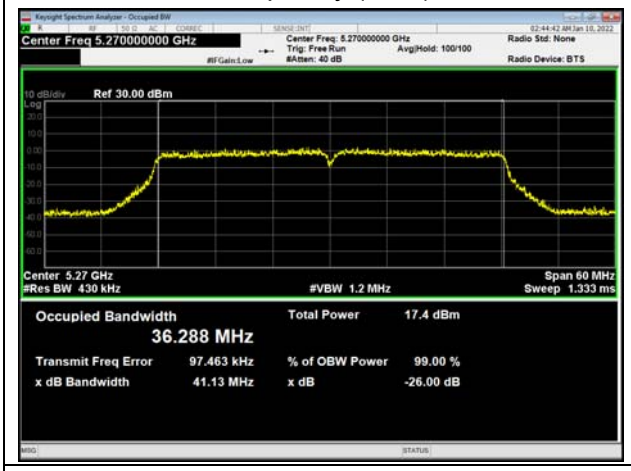


U-NII-2A, 802.11ac VHT20

Carrier frequency (MHz): 5300

U-NII-2A, 802.11ac VHT40

Carrier frequency (MHz): 5270

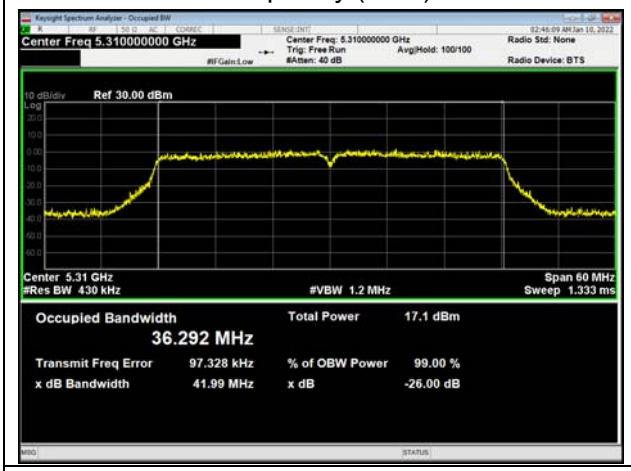


U-NII-2A, 802.11ac VHT20

Carrier frequency (MHz):5320

U-NII-2A, 802.11ac VHT40

Carrier frequency (MHz): 5310

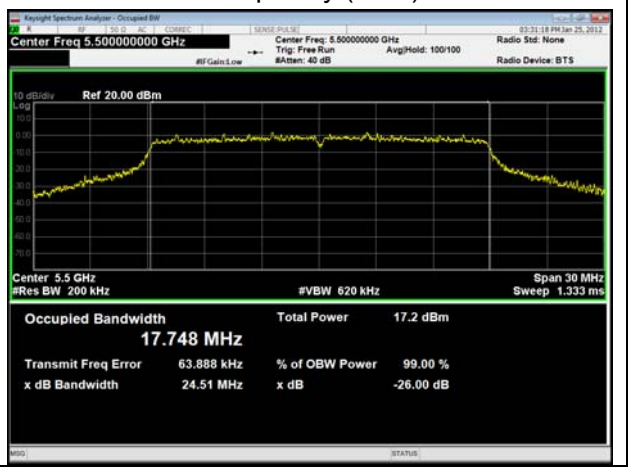


U-NII-2C, 802.11a

Carrier frequency (MHz): 5500

U-NII-2C, 802.11n HT20

Carrier frequency (MHz): 5500

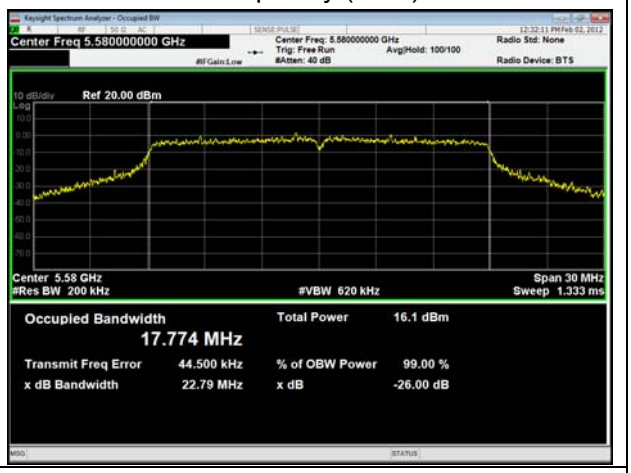


U-NII-2C, 802.11a

Carrier frequency (MHz): 5580

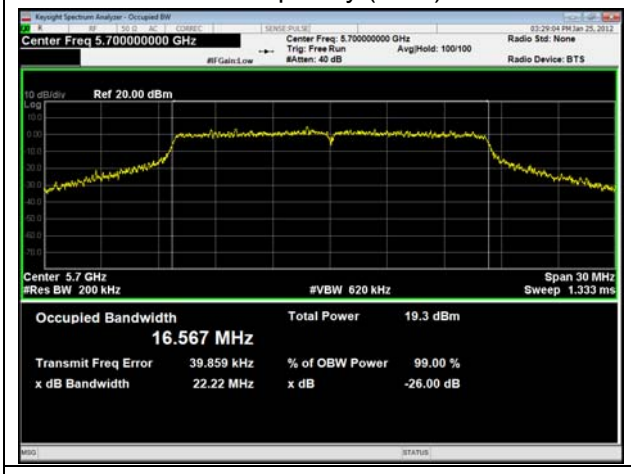
U-NII-2C, 802.11n HT20

Carrier frequency (MHz): 5580



U-NII-2C, 802.11a

Carrier frequency (MHz):5700

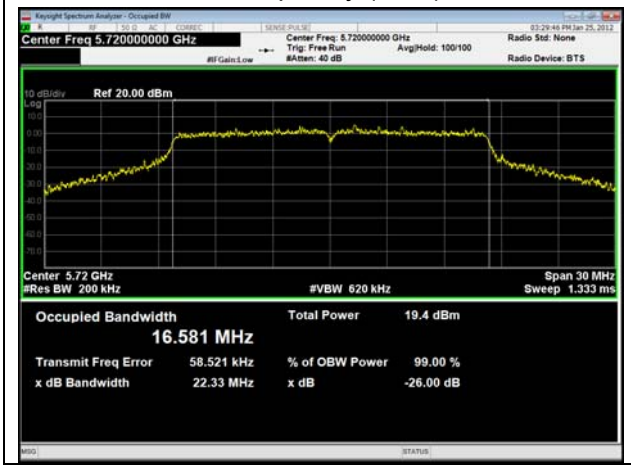


U-NII-2C, 802.11n HT20

Carrier frequency (MHz):5700

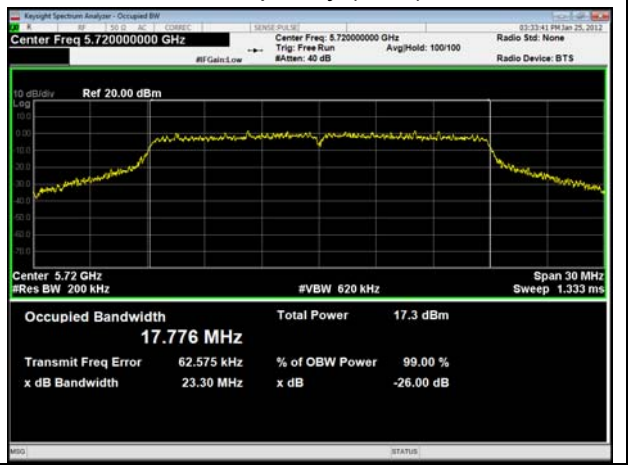
U-NII-2C, 802.11a

Carrier frequency (MHz):5720



U-NII-2C, 802.11n HT20

Carrier frequency (MHz):5720



U-NII-2C, 802.11n HT40

Carrier frequency (MHz): 5510

U-NII-2C, 802.11ac VHT20

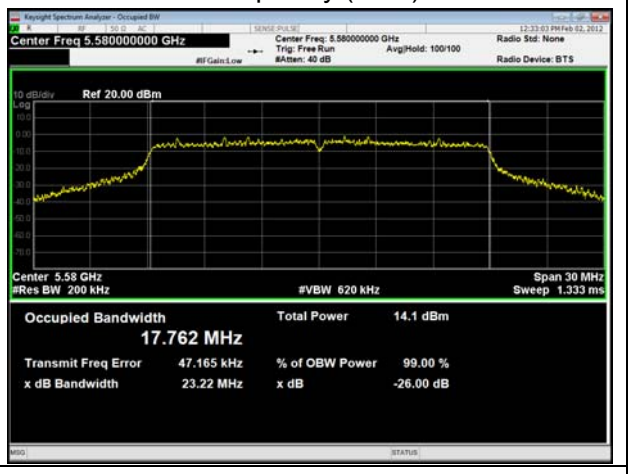
Carrier frequency (MHz): 5500

U-NII-2C, 802.11n HT40

Carrier frequency (MHz): 5550

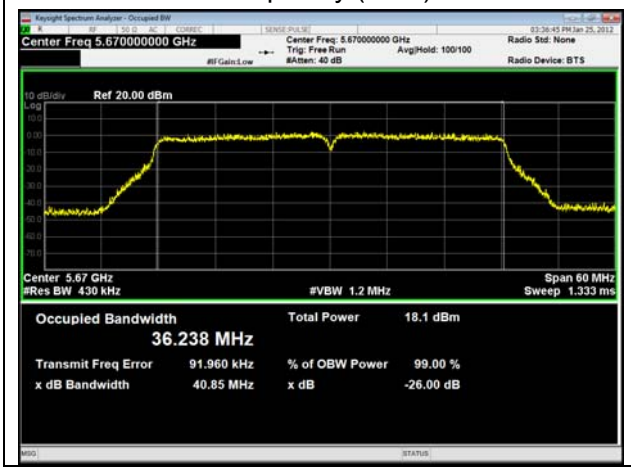
U-NII-2C, 802.11ac VHT20

Carrier frequency (MHz): 5580



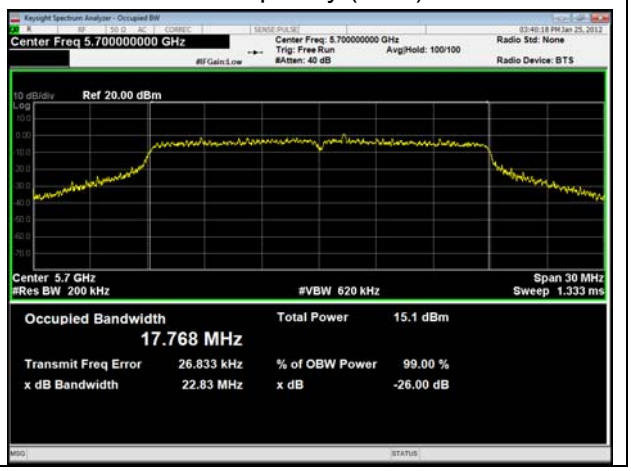
U-NII-2C, 802.11n HT40

Carrier frequency (MHz): 5670



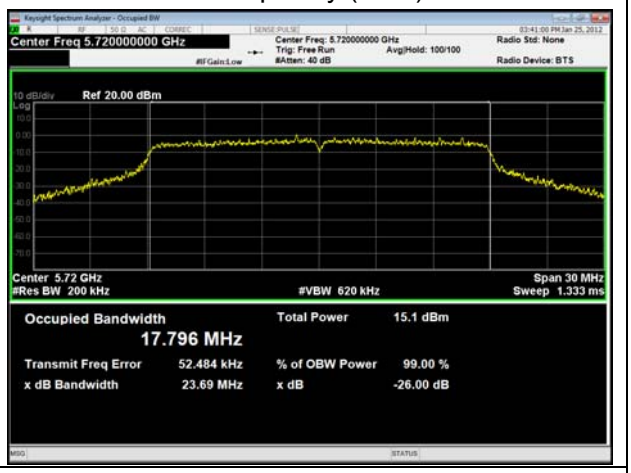
U-NII-2C, 802.11ac VHT20

Carrier frequency (MHz):5700



U-NII-2C, 802.11n HT40
Carrier frequency (MHz): 5710

U-NII-2C, 802.11ac VHT20
Carrier frequency (MHz):5720



U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5510

U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5550

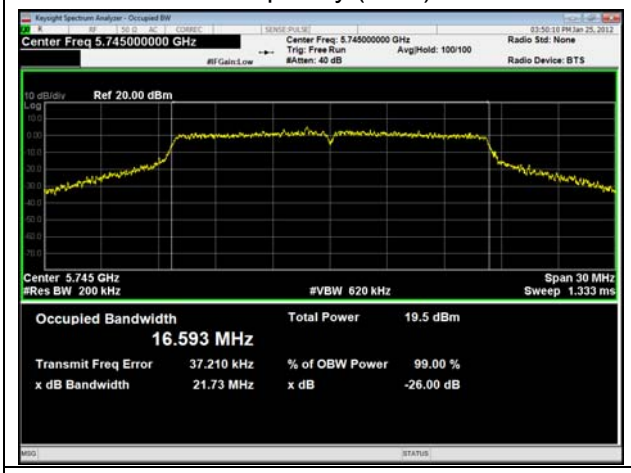
U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5670

U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5710

99% bandwidth

U-NII-3, 802.11a

Carrier frequency (MHz): 5745

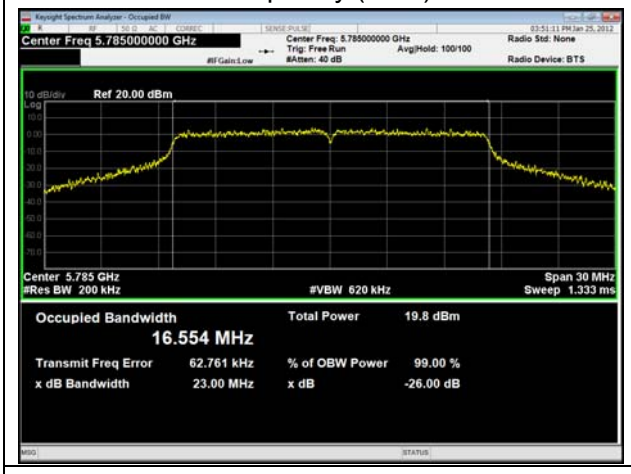


U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5745

U-NII-3, 802.11a

Carrier frequency (MHz): 5785



U-NII-3, 802.11n HT20

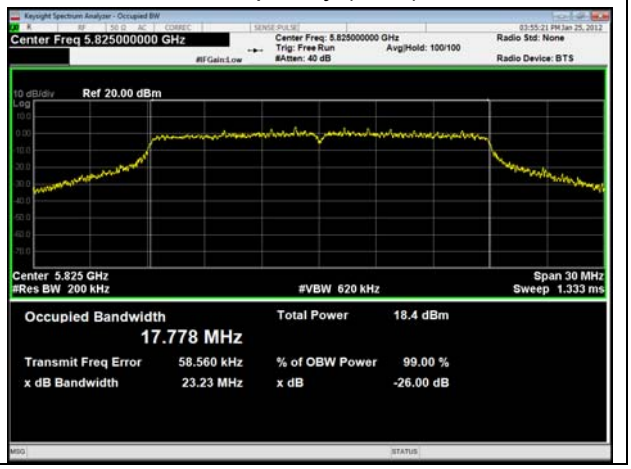
Carrier frequency (MHz): 5785

U-NII-3, 802.11a

Carrier frequency (MHz): 5825

U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT40

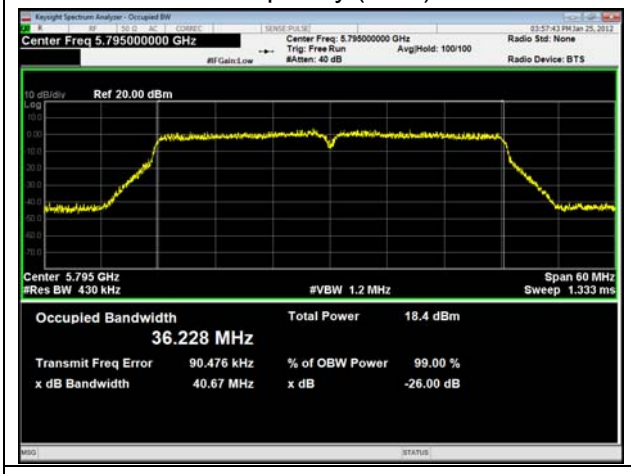
Carrier frequency (MHz): 5755

U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5745

U-NII-3, 802.11n HT40

Carrier frequency (MHz): 5795



U-NII-3, 802.11ac VHT20

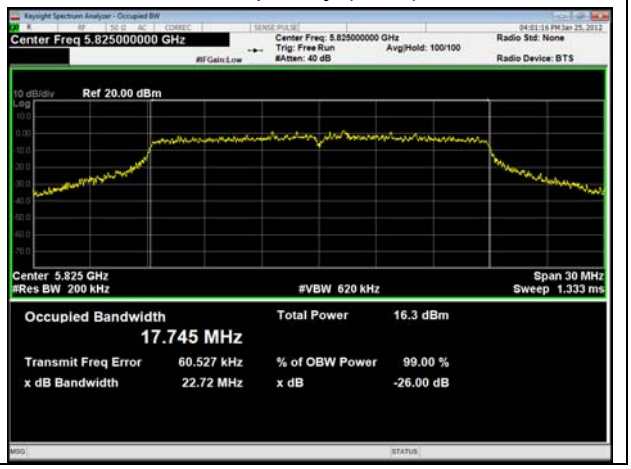
Carrier frequency (MHz): 5785

U-NII-3, 802.11ac VHT40

Carrier frequency (MHz): 5755

U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5825



U-NII-3, 802.11ac VHT40

Carrier frequency (MHz): 5795

Minimum 6 dB bandwidth

U-NII-3, 802.11a

Carrier frequency (MHz): 5745

U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5745

U-NII-3, 802.11a

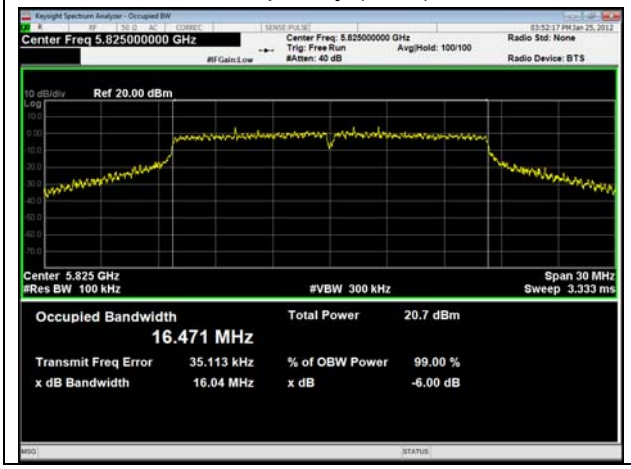
Carrier frequency (MHz): 5785

U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5785

U-NII-3, 802.11a

Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5825

U-NII-3, 802.11n HT40

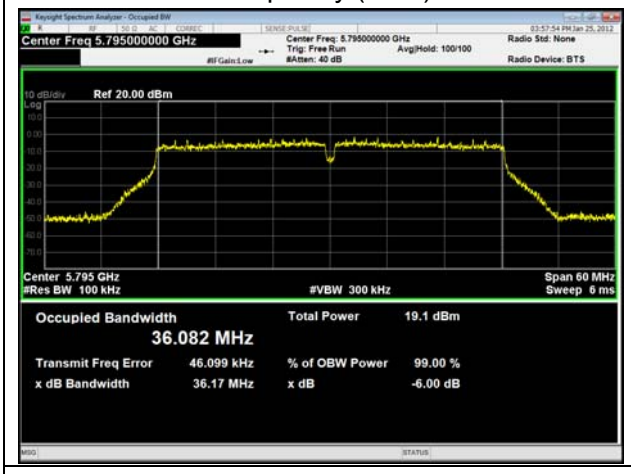
Carrier frequency (MHz): 5755

U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5745

U-NII-3, 802.11n HT40

Carrier frequency (MHz): 5795

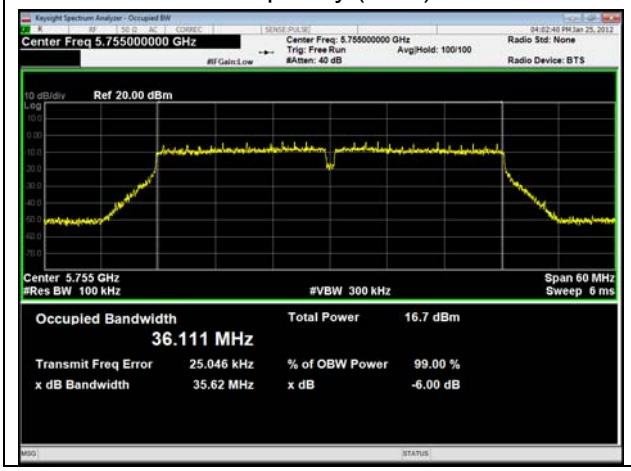


U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5785

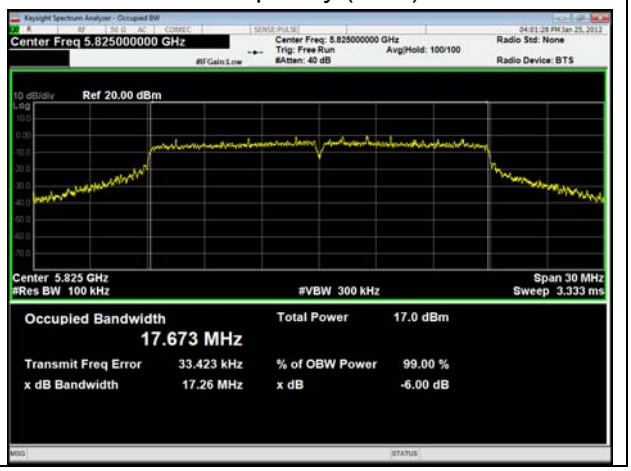
U-NII-3, 802.11ac VHT40

Carrier frequency (MHz): 5755



U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5825



U-NII-3, 802.11ac VHT40

Carrier frequency (MHz): 5795

5.2. Average Power Output

Ambient condition

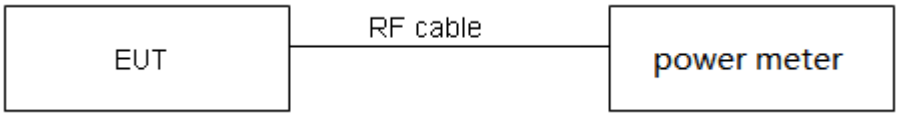
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

During the process of the testing, The EUT was connected to the average power meter through an external attenuator and a known loss cable. The EUT is max power transmission with proper modulation. We use Maximum average Conducted Output Power Level Method in KDB789033 for this test

The conducted Power is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

Test Setup



Limits

Rule FCC Part 15.407(a)(1)(2)(3)
(1) For the band 5.15-5.25 GHz.
(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23

dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3)For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.44 dB.

Test Results

Mode	T_{on} (ms)	$T_{(on+off)}$ (ms)	Duty cycle	Duty cycle correction Factor(dB)
802.11a	2.02	2.06	0.98	0.00
802.11n HT20	1.69	1.73	0.98	0.00
802.11n HT40	0.84	0.87	0.96	0.18
802.11ac VHT20	1.70	1.73	0.98	0.00
802.11ac VHT40	0.84	0.88	0.95	0.24
Note: when Duty cycle≥0.98, Duty cycle correction Factor not required.				

Power Index						
Channel	802.11a	802.11n HT20	802.11ac VHT20	Channel	802.11n HT40	802.11ac VHT40
CH36	14	12	10	CH38	12	10
CH40	14	12	10	CH46	12	10
CH48	14	12	10	/	/	/
CH52	14	12	10	CH54	12	10
CH60	14	12	10	CH62	12	10
CH64	14	12	10	/	/	/
CH100	14	12	10	CH102	12	10
CH116	14	12	10	CH110	12	10
CH140	14	12	10	CH134	12	10
CH144	14	12	10	CH142	12	10
CH149	14	12	10	CH151	12	10
CH157	14	12	10	CH159	12	10
CH165	14	12	10	/	/	/

Test Mode		Channel/Frequency (MHz)	B=26 dB bandwidth (MHz)	Limit 11 dBm + 10 log B (dBm)	Final Limit(dBm)
U-NII-2A	802.11a	52/5260	23.67	24.74>24	24.00
		60/5300	22.35	24.49>24	24.00
		64/5320	22.10	24.44>24	24.00
	802.11n HT20	52/5260	22.41	24.50>24	24.00
		60/5300	22.97	24.61>24	24.00
		64/5320	23.28	24.67>24	24.00
	802.11n HT40	54/5270	41.38	27.17>24	24.00
		62/5310	41.27	27.16>24	24.00
	802.11ac VHT20	52/5260	23.03	24.62>24	24.00
		60/5300	23.53	24.72>24	24.00
		64/5320	24.02	24.81>24	24.00
	802.11ac VHT40	54/5270	41.13	27.14>24	24.00
		62/5310	41.99	27.23>24	24.00
U-NII-2C	802.11a	100/5500	22.03	24.43>24	24.00
		116/5580	23.33	24.68>24	24.00
		140/5700	22.22	24.47>24	24.00
		144/5720	22.33	24.49>24	24.00
	802.11n HT20	100/5500	24.51	24.67>24	24.00
		116/5580	22.03	24.43>24	24.00
		140/5700	22.85	24.59>24	24.00
		144/5720	23.30	24.75>24	24.00
	802.11n HT40	102/5510	41.29	27.15>24	24.00
		110/5550	41.10	27.19>24	24.00
		134/5670	40.85	27.11>24	24.00
		142/5710	41.33	27.16>24	24.00
	802.11ac VHT20	100/5500	23.26	24.67>24	24.00
		116/5580	22.02	24.43>24	24.00
		140/5700	22.83	24.59>24	24.00
		144/5720	23.69	24.75>24	24.00
	802.11ac VHT40	102/5510	41.25	27.15>24	24.00
		110/5550	41.56	27.19>24	24.00
		134/5670	41.43	27.17>24	24.00
		142/5710	40.98	27.13>24	24.00
Note: 250mW=24dBm					

Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor

Antenna 1

U-NII-1

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	36/5180	14.05	14.05	24.00	PASS
	40/5200	14.17	14.17	24.00	PASS
	48/5240	14.14	14.14	24.00	PASS
802.11n HT20	36/5180	11.94	11.94	24.00	PASS
	40/5200	12.08	12.08	24.00	PASS
	48/5240	12.04	12.04	24.00	PASS
802.11n HT40	38/5190	13.56	13.74	24.00	PASS
	46/5230	13.67	13.85	24.00	PASS
802.11ac VHT20	36/5180	10.61	10.61	24.00	PASS
	40/5200	10.89	10.89	24.00	PASS
	48/5240	11.10	11.10	24.00	PASS
802.11ac VHT40	38/5190	10.67	10.91	24.00	PASS
	46/5230	11.02	11.26	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-2A

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	52/5260	14.03	14.03	24.00	PASS
	60/5300	13.97	13.97	24.00	PASS
	64/5320	14.01	14.01	24.00	PASS
802.11n HT20	52/5260	11.88	11.88	24.00	PASS
	60/5300	11.76	11.76	24.00	PASS
	64/5320	11.77	11.77	24.00	PASS
802.11n HT40	54/5270	13.63	13.81	24.00	PASS
	62/5310	13.35	13.53	24.00	PASS
802.11ac VHT20	52/5260	10.61	10.61	24.00	PASS
	60/5300	10.23	10.23	24.00	PASS
	64/5320	10.34	10.34	24.00	PASS
802.11ac VHT40	54/5270	11.28	11.52	24.00	PASS
	62/5310	11.19	11.43	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-2C

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	100/5500	14.12	14.12	24.00	PASS
	116/5580	14.13	14.13	24.00	PASS
	140/5700	14.74	14.74	24.00	PASS
	144/5720	14.81	14.81	24.00	PASS
802.11n HT20	100/5500	11.94	11.94	24.00	PASS
	116/5580	11.82	11.82	24.00	PASS
	140/5700	12.52	12.52	24.00	PASS
	144/5720	12.58	12.58	24.00	PASS
802.11n HT40	102/5510	13.15	13.33	24.00	PASS
	110/5550	13.42	13.60	24.00	PASS
	134/5670	13.39	13.57	24.00	PASS
	142/5710	13.52	13.70	24.00	PASS
802.11ac VHT20	100/5500	10.81	10.81	24.00	PASS
	116/5580	10.93	10.93	24.00	PASS
	140/5700	11.01	11.01	24.00	PASS
	144/5720	10.89	10.89	24.00	PASS
802.11ac VHT40	102/5510	10.67	10.91	24.00	PASS
	110/5550	11.09	11.33	24.00	PASS
	134/5670	11.26	11.50	24.00	PASS
	142/5710	11.13	11.37	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-3

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	149/5745	14.54	14.54	30.00	PASS
	157/5785	14.22	14.22	30.00	PASS
	165/5825	14.25	14.25	30.00	PASS
802.11n HT20	149/5745	12.34	12.34	30.00	PASS
	157/5785	12.02	12.02	30.00	PASS
	165/5825	12.05	12.05	30.00	PASS
802.11n HT40	151/5755	13.58	13.76	30.00	PASS
	159/5795	13.76	13.94	30.00	PASS
802.11ac VHT20	149/5745	10.69	10.69	30.00	PASS
	157/5785	10.88	10.88	30.00	PASS
	165/5825	11.21	11.21	30.00	PASS
802.11ac VHT40	151/5755	11.19	11.43	30.00	PASS
	159/5795	11.27	11.51	30.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

Antenna 2

U-NII-1

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	36/5180	14.97	14.97	24.00	PASS
	40/5200	15.10	15.10	24.00	PASS
	48/5240	15.15	15.15	24.00	PASS
802.11n HT20	36/5180	12.78	12.78	24.00	PASS
	40/5200	12.91	12.91	24.00	PASS
	48/5240	13.03	13.03	24.00	PASS
802.11n HT40	38/5190	13.11	13.29	24.00	PASS
	46/5230	13.19	13.37	24.00	PASS
802.11ac VHT20	36/5180	10.49	10.49	24.00	PASS
	40/5200	10.87	10.87	24.00	PASS
	48/5240	11.02	11.02	24.00	PASS
802.11ac VHT40	38/5190	10.88	11.12	24.00	PASS
	46/5230	11.16	11.40	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-2A

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	52/5260	15.13	15.13	24.00	PASS
	60/5300	14.97	14.97	24.00	PASS
	64/5320	14.98	14.98	24.00	PASS
802.11n HT20	52/5260	12.95	12.95	24.00	PASS
	60/5300	12.71	12.71	24.00	PASS
	64/5320	12.77	12.77	24.00	PASS
802.11n HT40	54/5270	13.23	13.41	24.00	PASS
	62/5310	13.16	13.34	24.00	PASS
802.11ac VHT20	52/5260	10.94	10.94	24.00	PASS
	60/5300	10.58	10.58	24.00	PASS
	64/5320	10.69	10.69	24.00	PASS
802.11ac VHT40	54/5270	11.23	11.47	24.00	PASS
	62/5310	10.93	11.17	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-2C

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	100/5500	14.93	14.93	24.00	PASS
	116/5580	15.03	15.03	24.00	PASS
	140/5700	14.84	14.84	24.00	PASS
	144/5720	14.94	14.94	24.00	PASS
802.11n HT20	100/5500	12.79	12.79	24.00	PASS
	116/5580	12.85	12.85	24.00	PASS
	140/5700	12.72	12.72	24.00	PASS
	144/5720	12.81	12.81	24.00	PASS
802.11n HT40	102/5510	13.09	13.27	24.00	PASS
	110/5550	13.06	13.24	24.00	PASS
	134/5670	13.24	13.42	24.00	PASS
	142/5710	13.02	13.20	24.00	PASS
802.11ac VHT20	100/5500	10.67	10.67	24.00	PASS
	116/5580	10.85	10.85	24.00	PASS
	140/5700	10.72	10.72	24.00	PASS
	144/5720	10.77	10.77	24.00	PASS
802.11ac VHT40	102/5510	10.58	10.82	24.00	PASS
	110/5550	10.91	11.15	24.00	PASS
	134/5670	11.07	11.31	24.00	PASS
	142/5710	10.94	11.18	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-3

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	149/5745	15.04	15.04	30.00	PASS
	157/5785	15.33	15.33	30.00	PASS
	165/5825	15.75	15.75	30.00	PASS
802.11n HT20	149/5745	12.91	12.91	30.00	PASS
	157/5785	13.24	13.24	30.00	PASS
	165/5825	13.67	13.67	30.00	PASS
802.11n HT40	151/5755	13.21	13.39	30.00	PASS
	159/5795	13.57	13.75	30.00	PASS
802.11ac VHT20	149/5745	10.81	10.81	30.00	PASS
	157/5785	11.12	11.12	30.00	PASS
	165/5825	11.65	11.65	30.00	PASS
802.11ac VHT40	151/5755	11.24	11.48	30.00	PASS
	159/5795	11.46	11.70	30.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

MIMO Antenna

U-NII-1

Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11a	36/5180	14.45	14.45	14.94	14.94	17.71	24.00	PASS
	44/5220	14.34	14.34	14.92	14.92	17.65	24.00	PASS
	48/5240	14.52	14.52	14.93	14.93	17.74	24.00	PASS
802.11n HT20	36/5180	12.14	12.14	12.41	12.41	15.29	24.00	PASS
	44/5220	12.21	12.21	12.68	12.68	15.46	24.00	PASS
	48/5240	12.32	12.32	12.69	12.69	15.52	24.00	PASS
802.11n HT40	38/5190	12.86	13.04	13.01	13.19	16.13	24.00	PASS
	46/5230	12.98	13.16	13.11	13.29	16.24	24.00	PASS
802.11ac VHT20	36/5180	9.89	9.89	10.12	10.12	13.02	24.00	PASS
	44/5220	10.81	10.81	10.52	10.52	13.68	24.00	PASS
	48/5240	10.90	10.90	10.48	10.48	13.71	24.00	PASS
802.11ac VHT40	38/5190	10.31	10.55	10.79	11.03	13.81	24.00	PASS
	46/5230	10.27	10.51	11.44	11.68	14.15	24.00	PASS

Note: 1. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then Directional gain = 10 log[($10^{G1/10}$ + $10^{G2/10}$)/N_{ANT}] dBi = 10 log[($10^{3.2/10}$ + $10^{4.0/10}$)/2] = 3.6dBi < 6dBi. So the limit is 24dBm.

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Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11a	52/5260	14.56	14.56	15.05	15.05	17.82	24.00	PASS
	60/5300	14.29	14.29	14.45	14.45	17.38	24.00	PASS
	64/5320	14.17	14.17	14.47	14.47	17.33	24.00	PASS
802.11n HT20	52/5260	12.27	12.27	12.64	12.64	15.47	24.00	PASS
	60/5300	12.64	12.64	12.15	12.15	15.41	24.00	PASS
	64/5320	12.71	12.71	12.17	12.17	15.46	24.00	PASS
802.11n HT40	54/5270	13.32	13.50	13.17	13.35	16.44	24.00	PASS
	62/5310	12.89	13.07	12.69	12.87	15.98	24.00	PASS
802.11ac VHT20	52/5260	10.24	10.24	11.26	11.26	13.79	24.00	PASS
	60/5300	10.51	10.51	10.67	10.67	13.60	24.00	PASS
	64/5320	9.75	9.75	10.71	10.71	13.27	24.00	PASS
802.11ac VHT40	54/5270	9.93	10.17	11.17	11.41	13.85	24.00	PASS
	62/5310	9.56	9.80	10.51	10.75	13.31	24.00	PASS

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),
The Total Power $=10\log(10^{(\text{Power antenna1 in dBm}/10)}+10^{(\text{Power antenna2 in dBm}/10)}$.

U-NII-2C

Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11a	100/5500	14.01	14.01	14.26	14.26	17.15	24.00	PASS
	116/5580	14.83	14.83	15.16	15.16	18.01	24.00	PASS
	140/5700	14.73	14.73	14.93	14.93	17.84	24.00	PASS
	144/5720	14.66	14.66	14.88	14.88	17.78	24.00	PASS
802.11n HT20	100/5500	12.43	12.43	11.91	11.91	15.19	24.00	PASS
	116/5580	12.68	12.68	12.86	12.86	15.78	24.00	PASS
	140/5700	12.81	12.81	12.77	12.77	15.80	24.00	PASS
	144/5720	12.41	12.41	12.72	12.72	15.58	24.00	PASS
802.11n HT40	102/5510	12.22	12.40	12.69	12.87	15.65	24.00	PASS
	110/5550	12.25	12.43	13.19	13.37	15.94	24.00	PASS
	134/5670	12.94	13.12	13.48	13.66	16.41	24.00	PASS
	142/5710	12.87	13.05	13.22	13.40	16.24	24.00	PASS
802.11ac HT20	100/5500	9.65	9.65	10.43	10.43	13.07	24.00	PASS
	116/5580	10.78	10.78	11.18	11.18	13.99	24.00	PASS
	140/5700	10.72	10.72	10.99	10.99	13.87	24.00	PASS
	144/5720	10.54	10.54	10.67	10.67	13.62	24.00	PASS
802.11ac HT40	102/5510	10.12	10.36	10.94	11.18	13.80	24.00	PASS
	110/5550	10.24	10.48	11.51	11.75	14.17	24.00	PASS
	134/5670	10.82	11.06	11.54	11.78	14.45	24.00	PASS
	142/5710	10.68	10.92	11.37	11.61	14.29	24.00	PASS

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1), The Total Power $=10\log(10^{(\text{Power antenna1 in dBm}/10)}+10^{(\text{Power antenna2 in dBm}/10)}$.

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Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11a	149/5745	14.73	14.73	14.99	14.99	17.87	30.00	PASS
	157/5785	15.17	15.17	15.27	15.27	18.23	30.00	PASS
	165/5825	15.43	15.43	15.73	15.73	18.59	30.00	PASS
802.11n HT20	149/5745	12.23	12.23	12.65	12.65	15.46	30.00	PASS
	157/5785	12.62	12.62	12.98	12.98	15.81	30.00	PASS
	165/5825	12.98	12.98	13.57	13.57	16.30	30.00	PASS
802.11n HT40	151/5755	12.67	12.85	13.28	13.46	16.18	30.00	PASS
	159/5795	12.41	12.59	13.46	13.64	16.16	30.00	PASS
802.11ac VHT20	149/5745	10.73	10.73	10.93	10.93	13.84	30.00	PASS
	157/5785	11.13	11.13	11.27	11.27	14.21	30.00	PASS
	165/5825	11.61	11.61	11.89	11.89	14.76	30.00	PASS
802.11ac VHT40	151/5755	10.54	10.78	11.37	11.61	14.23	30.00	PASS
	159/5795	10.29	10.53	11.35	11.59	14.11	30.00	PASS

Note:1. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then Directional gain = 10 log[($10^{G1/10}$ + $10^{G2/10}$)/N_{ANT}] dBi = 10 log[($10^{3.6/10}$ + $10^{4.0/10}$)/2] = 3.80dBi < 6dBi. So the limit is 30dBm.

5.3. Frequency Stability

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

1. Frequency stability with respect to ambient temperature

a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.

b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.

c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.

e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.

f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

g) Measure the frequency at each of frequencies specified in 5.6.

h) Switch OFF the EUT but do not switch OFF the oscillator heater.

i) Lower the chamber temperature by not more that 10°C, and allow the temperature inside the chamber to stabilize.

j) Repeat step f) through step i) down to the lowest specified temperature.

2. Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature (+15°C to +25 °C). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.

b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
c) Measure the frequency at each of the frequencies specified in 5.6.
d) Repeat the above procedure at 85% and 115% of the nominal supply voltage.

Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 936Hz

Test Results

Voltage (V)	Temperature (°C)	U-NII-1 Test Results			
		5200MHz			
		1min	2min	5min	10min
3.8	-20	5199.991127	5199.982544	5199.979710	5199.970486
3.8	-10	5199.999229	5199.980408	5199.978437	5199.963412
3.8	0	5199.997753	5199.971121	5199.968792	5199.960791
3.8	10	5199.988230	5199.968914	5199.959323	5199.960332
3.8	20	5199.984732	5199.962135	5199.959312	5199.959737
3.8	30	5199.980566	5199.959441	5199.950718	5199.956632
3.8	40	5199.972864	5199.958993	5199.950046	5199.955832
3.8	50	5199.972623	5199.957527	5199.942823	5199.953540
3.6	20	5199.965409	5199.949379	5199.932972	5199.948982
4.2	20	5199.961376	5199.946939	5199.924319	5199.946868
Max. ΔMHz		-0.038624	-0.053061	-0.075681	-0.053132
PPM		-7.427725	-10.203948	-14.554009	-10.217770

Voltage (V)	Temperature (°C)	U-NII-2A Test Results			
		5300MHz			
		1min	2min	5min	10min
3.8	-20	5299.993118	5299.987535	5299.981584	5299.978728
3.8	-10	5299.987649	5299.980797	5299.972833	5299.975872
3.8	0	5299.985059	5299.970888	5299.964010	5299.973878
3.8	10	5299.979593	5299.965003	5299.954990	5299.972677
3.8	20	5299.974615	5299.963122	5299.949222	5299.972648
3.8	30	5299.968287	5299.960874	5299.945914	5299.965415
3.8	40	5299.962627	5299.960532	5299.940906	5299.962112
3.8	50	5299.952792	5299.956585	5299.931206	5299.955764
3.6	20	5299.951054	5299.952528	5299.921233	5299.954003
4.2	20	5299.941263	5299.945404	5299.915119	5299.950419
Max. ΔMHz		-0.058737	-0.054596	-0.084881	-0.049581
PPM		-11.082411	-10.301147	-16.015332	-9.354864

Voltage (V)	Temperature (°C)	U-NII-2C Test Results			
		5580MHz			
		1min	2min	5min	10min
3.8	-20	5579.991272	5579.981537	5579.977365	5579.970254
3.8	-10	5579.988318	5579.973768	5579.971387	5579.967064
3.8	0	5579.984006	5579.967147	5579.964932	5579.960606
3.8	10	5579.980024	5579.964021	5579.962361	5579.957062
3.8	20	5579.979599	5579.955296	5579.961385	5579.956997
3.8	30	5579.973579	5579.948136	5579.951829	5579.956894
3.8	40	5579.971172	5579.938290	5579.949598	5579.948583
3.8	50	5579.963908	5579.938125	5579.948765	5579.940456
3.6	20	5579.963506	5579.937220	5579.939219	5579.935126
4.2	20	5579.954619	5579.932952	5579.936185	5579.933108
Max. ΔMHz		-0.045381	-0.067048	-0.063815	-0.066892
PPM		-8.132878	-12.015787	-11.436342	-11.987821

Voltage (V)	Temperature (°C)	U-NII-3 Test Results			
		5785MHz			
		1min	2min	5min	10min
3.8	-20	5785.002771	5785.002450	5784.999422	5784.990017
3.8	-10	5784.994005	5784.996092	5784.997954	5784.984431
3.8	0	5784.989305	5784.996011	5784.994293	5784.974477
3.8	10	5784.985935	5784.992623	5784.989784	5784.967787
3.8	20	5784.983639	5784.983193	5784.989735	5784.966429
3.8	30	5784.978099	5784.982455	5784.980631	5784.965935
3.8	40	5784.973343	5784.975119	5784.979774	5784.964181
3.8	50	5784.967563	5784.966653	5784.972616	5784.961756
3.6	20	5784.963136	5784.964821	5784.968444	5784.955667
4.2	20	5784.961346	5784.960356	5784.960005	5784.952212
Max. ΔMHz		-0.038654	-0.039644	-0.039995	-0.047788
PPM		-6.681844	-6.852895	-6.913526	-8.260680

5.4. Power Spectral Density

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

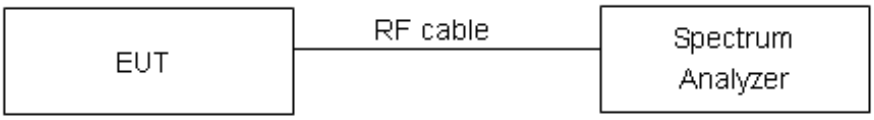
Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

Set RBW = 1MHz, VBW =3MHz for the band 5.150-5.250GHz, 5.250-5.350GHz, 5.470-5.725GHz.
Set RBW = 470kHz, VBW =1.5MHz for the band 5.725-5.850GHz

The conducted PSD is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

Test setup



Limits

Rule FCC Part 15.407(a)(1)/ Part 15.407(a)(2) / Part 15.407(a)(3)
For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500kHz band. If transmittingantennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the

amount in dB that the directional gain of the antenna exceeds 6 dBi.

Frequency Bands/MHz	Limits
5150-5250	17/11dBm/MHz
5.25-5.35 GHz and 5.47-5.725 GHz	11dBm/MHz
5725-5850	30dBm/500kHz

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.75dB.

Test Results:

Note: Power Spectral Density =Read Value+Duty cycle correction factor

SISO Antenna 1

U-NII-1

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	36/5180	4.09	4.09	11	PASS
	40/5200	4.51	4.51	11	PASS
	48/5240	4.76	4.76	11	PASS
802.11n HT20	36/5180	2.15	2.15	11	PASS
	40/5200	2.53	2.53	11	PASS
	48/5240	2.23	2.23	11	PASS
802.11n HT40	38/5190	-0.59	-0.41	11	PASS
	46/5230	-0.56	-0.38	11	PASS
802.11ac VHT20	36/5180	0.33	0.33	11	PASS
	40/5200	0.87	0.87	11	PASS
	48/5240	0.68	0.68	11	PASS
802.11ac VHT40	38/5190	-1.95	-1.71	11	PASS
	46/5230	-2.07	-1.83	11	PASS

U-NII-2A

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	52/5260	4.74	4.74	11	PASS
	60/5300	4.76	4.76	11	PASS
	64/5320	4.82	4.82	11	PASS
802.11n HT20	52/5260	2.67	2.67	11	PASS
	60/5300	2.19	2.19	11	PASS
	64/5320	2.18	2.18	11	PASS
802.11n HT40	54/5270	-0.17	0.01	11	PASS
	62/5310	-0.38	-0.20	11	PASS
802.11ac VHT20	52/5260	0.22	0.22	11	PASS
	60/5300	0.45	0.45	11	PASS
	64/5320	0.04	0.04	11	PASS
802.11ac VHT40	54/5270	-2.33	-2.09	11	PASS
	62/5310	-2.60	-2.36	11	PASS

U-NII-2C

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	100/5500	4.25	4.25	11	PASS
	116/5580	4.35	4.35	11	PASS
	140/5700	4.70	4.70	11	PASS
	144/5720	5.23	5.23	11	PASS
802.11n HT20	100/5500	1.84	1.84	11	PASS
	116/5580	1.57	1.57	11	PASS
	140/5700	2.48	2.48	11	PASS
	144/5720	2.89	2.89	11	PASS
802.11n HT40	102/5510	-1.07	-0.89	11	PASS
	110/5550	-0.41	-0.23	11	PASS
	134/5670	0.01	0.19	11	PASS
	142/5710	0.02	0.20	11	PASS
802.11ac VHT20	100/5500	-0.30	-0.30	11	PASS
	116/5580	-0.42	-0.42	11	PASS
	140/5700	0.30	0.30	11	PASS
	144/5720	0.88	0.88	11	PASS
802.11ac VHT40	102/5510	-3.07	-2.83	11	PASS
	110/5550	-2.12	-1.88	11	PASS
	134/5670	-1.90	-1.66	11	PASS
	142/5710	-1.89	-1.65	11	PASS

U-NII-3

Mode	Channel Number	Read Value (dBm/470kHz)	Power Spectral Density (dBm/500kHz)	Limit (dBm/500kHz)	Conclusion
802.11a	149/5745	1.10	1.37	30	PASS
	157/5785	1.31	1.58	30	PASS
	165/5825	1.88	2.15	30	PASS
802.11n HT20	149/5745	-0.98	-0.71	30	PASS
	157/5785	-1.27	-1.00	30	PASS
	165/5825	-0.05	0.22	30	PASS
802.11n HT40	151/5755	-3.32	-2.87	30	PASS
	159/5795	-4.20	-3.75	30	PASS
802.11ac VHT20	149/5745	-3.26	-2.99	30	PASS
	157/5785	-3.27	-3.00	30	PASS
	165/5825	-2.41	-2.14	30	PASS
802.11ac VHT40	151/5755	-5.73	-5.22	30	PASS
	159/5795	-6.35	-5.84	30	PASS
Note: PSD=Read Value + Duty cycle correction factor+10*LOG10(500/470)					

SISO Antenna 2

U-NII-1

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	36/5180	4.99	4.99	11	PASS
	40/5200	5.16	5.16	11	PASS
	48/5240	5.69	5.69	11	PASS
802.11n HT20	36/5180	2.94	2.94	11	PASS
	40/5200	3.15	3.15	11	PASS
	48/5240	3.21	3.21	11	PASS
802.11n HT40	38/5190	0.19	0.37	11	PASS
	46/5230	0.38	0.56	11	PASS
802.11ac VHT20	36/5180	0.95	0.95	11	PASS
	40/5200	1.04	1.04	11	PASS
	48/5240	0.96	0.96	11	PASS
802.11ac VHT40	38/5190	-1.92	-1.68	11	PASS
	46/5230	-1.64	-1.40	11	PASS

U-NII-2A

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	52/5260	5.78	5.78	11	PASS
	60/5300	5.44	5.44	11	PASS
	64/5320	5.75	5.75	11	PASS
802.11n HT20	52/5260	3.28	3.28	11	PASS
	60/5300	2.77	2.77	11	PASS
	64/5320	3.22	3.22	11	PASS
802.11n HT40	54/5270	0.38	0.56	11	PASS
	62/5310	0.20	0.38	11	PASS
802.11ac VHT20	52/5260	0.49	0.49	11	PASS
	60/5300	0.59	0.59	11	PASS
	64/5320	0.82	0.82	11	PASS
802.11ac VHT40	54/5270	-1.82	-1.58	11	PASS
	62/5310	-1.55	-1.31	11	PASS

U-NII-2C

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	100/5500	5.95	5.95	11	PASS
	116/5580	5.24	5.24	11	PASS
	140/5700	5.84	5.84	11	PASS
	144/5720	5.44	5.44	11	PASS
802.11n HT20	100/5500	3.33	3.33	11	PASS
	116/5580	2.58	2.58	11	PASS
	140/5700	3.79	3.79	11	PASS
	144/5720	3.15	3.15	11	PASS
802.11n HT40	102/5510	0.84	1.02	11	PASS
	110/5550	0.45	0.63	11	PASS
	134/5670	0.86	1.04	11	PASS
	142/5710	0.26	0.44	11	PASS
802.11ac VHT20	100/5500	1.26	1.26	11	PASS
	116/5580	0.53	0.53	11	PASS
	140/5700	1.21	1.21	11	PASS
	144/5720	1.26	1.26	11	PASS
802.11ac VHT40	102/5510	-1.65	-1.41	11	PASS
	110/5550	-1.78	-1.54	11	PASS
	134/5670	-0.97	-0.73	11	PASS
	142/5710	-1.61	-1.37	11	PASS

U-NII-3

Mode	Channel Number	Read Value (dBm/470kHz)	Power Spectral Density (dBm/500kHz)	Limit (dBm/500kHz)	Conclusion
802.11a	149/5745	3.14	3.41	30	PASS
	157/5785	2.81	3.08	30	PASS
	165/5825	3.40	3.67	30	PASS
802.11n HT20	149/5745	0.36	0.63	30	PASS
	157/5785	0.90	1.17	30	PASS
	165/5825	1.11	1.38	30	PASS
802.11n HT40	151/5755	-2.62	-2.17	30	PASS
	159/5795	-2.04	-1.59	30	PASS
802.11ac VHT20	149/5745	-1.77	-1.50	30	PASS
	157/5785	-1.55	-1.28	30	PASS
	165/5825	-0.84	-0.57	30	PASS
802.11ac VHT40	151/5755	-4.65	-4.14	30	PASS
	159/5795	-3.99	-3.48	30	PASS
Note: PSD=Read Value + Duty cycle correction factor+10*LOG10(500/470)					

MIMO Antenna

U-NII-1

Mode	Channel/ Frequency (MHz)	Power Spectral Density					Limit (dBm /MHz)	Conclusion
		Antenna 1		Antenna 2		Total Power (dBm /MHz)		
		Read Value (dBm/MHz)	PSD (dBm /MHz)	Read Value (dBm/MHz)	PSD (dBm /MHz)			
802.11a	36/5180	4.28	4.28	5.77	5.77	8.10	11.00	PASS
	40/5200	4.75	4.75	5.47	5.47	8.14	11.00	PASS
	48/5240	4.81	4.81	5.04	5.04	7.94	11.00	PASS
802.11n HT20	36/5180	2.46	2.46	3.36	3.36	5.94	11.00	PASS
	40/5200	2.60	2.60	3.67	3.67	6.18	11.00	PASS
	48/5240	2.79	2.79	3.77	3.77	6.32	11.00	PASS
802.11n HT40	38/5190	-0.65	-0.47	0.11	0.29	2.94	11.00	PASS
	46/5230	-0.16	0.02	0.52	0.70	3.39	11.00	PASS
802.11ac VHT20	36/5180	0.06	0.06	1.02	1.02	3.58	11.00	PASS
	40/5200	0.69	0.69	1.59	1.59	4.17	11.00	PASS
	48/5240	0.25	0.25	1.40	1.40	3.87	11.00	PASS
802.11ac VHT40	38/5190	-2.39	-2.15	-1.54	-1.30	1.31	11.00	PASS
	46/5230	-2.66	-2.42	-2.33	-2.09	0.76	11.00	PASS

Note: 1. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then Directional gain = 10 log[($10^{G1/10}$ + $10^{G2/10}$)/N_{ANT}] dBi = 10 log[($10^{3.2/10}$ + $10^{4.0/10}$)/2] = 3.6dBi < 6dBi. So the limit is 11 dBm.

U-NII-2A

Mode	Channel /Frequency (MHz)	Power Spectral Density					Limit (dBm /MHz)	Conclusion
		ANT1		ANT2		Total PSD (dBm/MHz)		
		Read Value (dBm/MHz)	PSD (dBm/MHz)	Read Value (dBm/MHz)	PSD (dBm/MHz)			
802.11a	52/5260	4.82	4.82	4.91	4.91	7.88	11.00	PASS
	60/5300	4.41	4.41	4.66	4.66	7.55	11.00	PASS
	64/5320	4.44	4.44	5.56	5.56	8.05	11.00	PASS
802.11n HT20	52/5260	1.84	1.84	2.09	2.09	4.98	11.00	PASS
	60/5300	2.00	2.00	2.48	2.48	5.26	11.00	PASS
	64/5320	3.09	3.09	1.46	1.46	5.36	11.00	PASS
802.11n HT40	54/5270	-0.68	-0.50	0.01	0.19	2.87	11.00	PASS
	62/5310	-0.93	-0.75	0.49	0.67	3.03	11.00	PASS
802.11ac HT20	52/5260	-0.25	-0.25	0.08	0.08	2.93	11.00	PASS
	60/5300	-0.11	-0.11	0.09	0.09	3.00	11.00	PASS
	64/5320	-0.13	-0.13	1.42	1.42	3.72	11.00	PASS
802.11ac HT40	54/5270	-3.01	-2.77	-2.26	-2.02	0.63	11.00	PASS
	62/5310	-2.83	-2.59	-2.23	-1.99	0.73	11.00	PASS

Note: 1. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then Directional gain = 10 log[($10^{G1/10}$ + $10^{G2/10}$)/N_{ANT}] dBi = 10 log[($10^{3.2/10}$ + $10^{4.0/10}$)/2] = 3.6dBi < 6dBi. So the limit is 11dBm.

U-NII-2C

Mode	Channel /Frequency (MHz)	Power Spectral Density					Limit (dBm /MHz)	Conclusion
		ANT1		ANT2		Total PSD (dBm/MHz)		
		Read Value (dBm/MHz)	PSD (dBm/MHz)	Read Value (dBm/MHz)	PSD (dBm/MHz)			
802.11a	100/5500	4.49	4.49	4.90	4.90	7.71	11.00	PASS
	116/5580	4.60	4.60	5.24	5.24	7.94	11.00	PASS
	140/5700	5.12	5.12	5.32	5.32	8.23	11.00	PASS
	144/5720	5.72	5.72	5.44	5.44	8.59	11.00	PASS
802.11n HT20	100/5500	1.46	1.46	2.77	2.77	5.17	11.00	PASS
	116/5580	1.83	1.83	2.98	2.98	5.45	11.00	PASS
	140/5700	2.68	2.68	3.26	3.26	5.99	11.00	PASS
	144/5720	3.06	3.06	3.36	3.36	6.22	11.00	PASS
802.11n HT40	102/5510	-1.09	-0.91	0.22	0.40	2.81	11.00	PASS
	110/5550	-1.47	-1.29	0.99	1.17	3.13	11.00	PASS
	134/5670	0.23	0.41	0.63	0.81	3.63	11.00	PASS
	142/5710	0.14	0.32	-0.15	0.03	3.19	11.00	PASS
802.11ac HT20	100/5500	-0.64	-0.64	0.79	0.79	3.14	11.00	PASS
	116/5580	-0.36	-0.36	-0.19	-0.19	2.74	11.00	PASS
	140/5700	0.82	0.82	-0.01	-0.01	3.44	11.00	PASS
	144/5720	0.91	0.91	1.26	1.26	4.10	11.00	PASS
802.11ac HT40	102/5510	-2.70	-2.46	-2.07	-1.83	0.88	11.00	PASS
	110/5550	-1.86	-1.62	-0.97	-0.73	1.86	11.00	PASS
	134/5670	-1.17	-0.93	-1.37	-1.13	1.98	11.00	PASS
	142/5710	-1.99	-1.75	-2.40	-2.16	1.06	11.00	PASS

Note: 1. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then Directional gain = 10 log[($10^{G1/10}$ + $10^{G2/10}$)/N_{ANT}] dBi = 10 log[($10^{3.6/10}$ + $10^{4.0/10}$)/2] = 3.8dBi < 6dBi. So the limit is 11dBm.

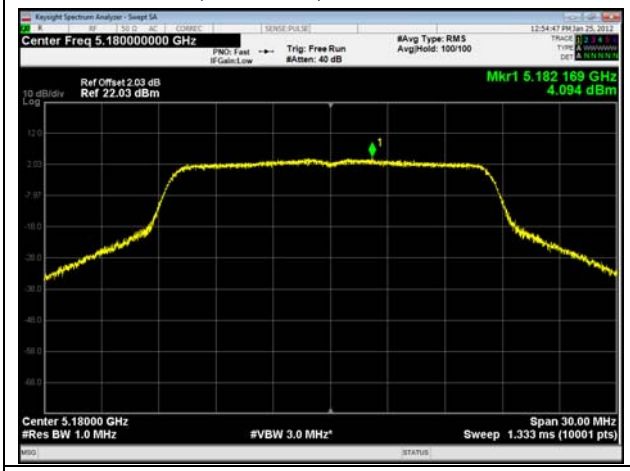
U-NII-3

Mode	Channel/ Frequency (MHz)	Power Spectral Density					Limit (dBm/ 500kHz)	Conclusion
		Antenna 1		Antenna 2		Total Power (dBm/ 500kHz)		
		Read Value (dBm/ 500kHz)	PSD (dBm/ 500kHz)	Read Value (dBm/ 500kHz)	PSD (dBm/ 500kHz)			
802.11a	149/5745	1.66	1.93	2.01	2.28	5.12	30.00	PASS
	157/5785	1.34	1.61	2.03	2.30	4.98	30.00	PASS
	165/5825	2.39	2.66	2.72	2.99	5.84	30.00	PASS
802.11n HT20	149/5745	-1.43	-1.16	-0.11	0.16	2.56	30.00	PASS
	157/5785	-1.51	-1.24	-0.31	-0.04	2.41	30.00	PASS
	165/5825	0.10	0.37	-0.20	0.07	3.23	30.00	PASS
802.11n HT40	151/5755	-3.19	-2.74	-3.68	-3.23	0.04	30.00	PASS
	159/5795	-3.39	-2.94	-3.47	-3.02	0.03	30.00	PASS
802.11ac VHT20	149/5745	-2.90	-2.63	-3.59	-3.32	0.05	30.00	PASS
	157/5785	-2.68	-2.41	-2.98	-2.71	0.45	30.00	PASS
	165/5825	-1.80	-1.53	-2.08	-1.81	1.34	30.00	PASS
802.11ac VHT40	151/5755	-5.17	-4.66	-4.97	-4.46	-1.55	30.00	PASS
	159/5795	-6.25	-5.74	-5.37	-4.86	-2.26	30.00	PASS

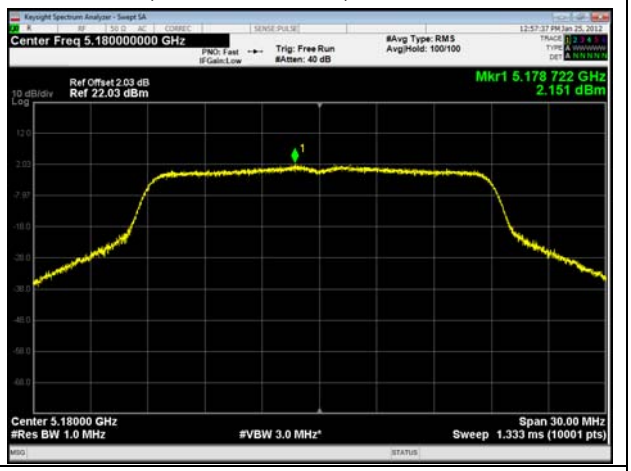
Note: 1. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then Directional gain = 10 log[($10^{G1/10}$ + $10^{G2/10}$)/N_{ANT}] dBi = 10 log[($10^{3.6/10}$ + $10^{4.0/10}$)/2] = 3.8dBi < 6dBi. So the limit is 30dBm.

SISO Antenna 1

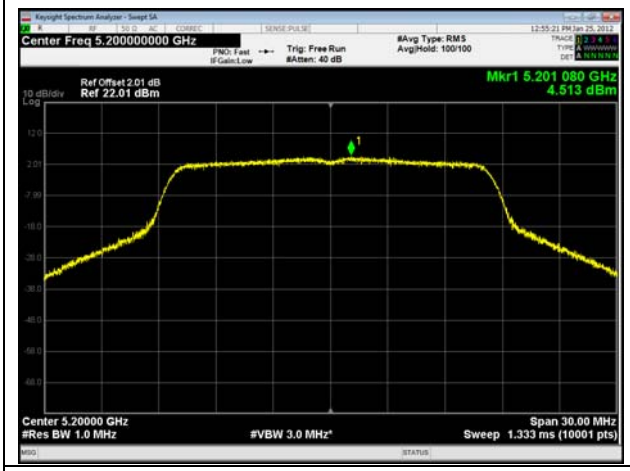
U-NII-1, 802.11a, Channel No.: 36



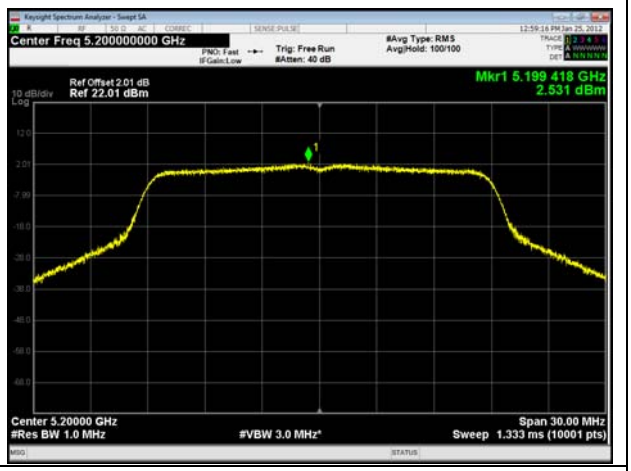
U-NII-1, 802.11n HT20, Channel No.: 36



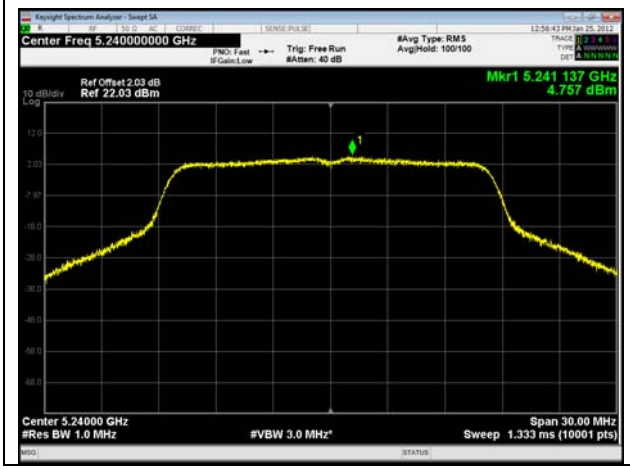
U-NII-1, 802.11a, Channel No.: 40



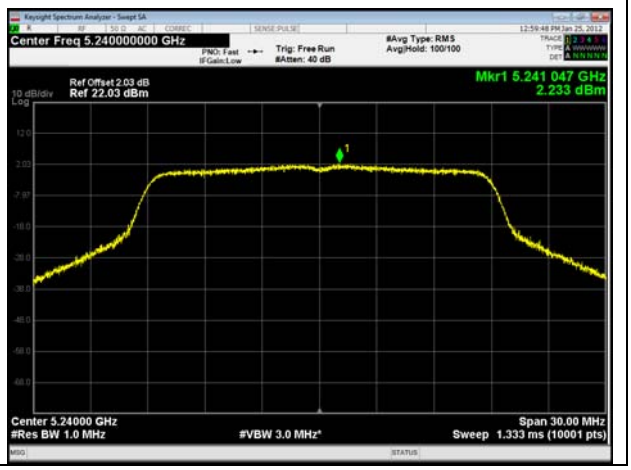
U-NII-1, 802.11n HT20, Channel No.: 40



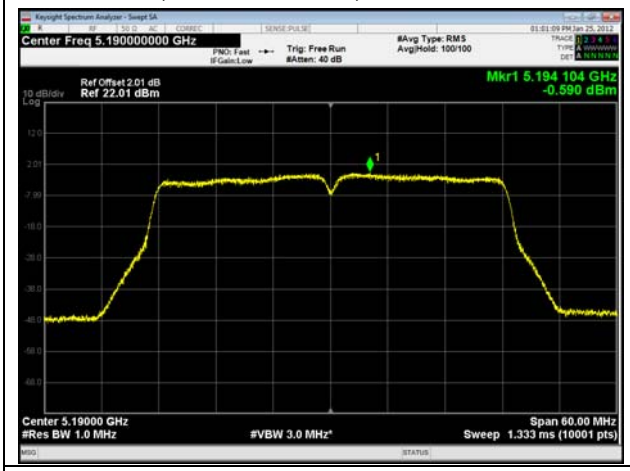
U-NII-1, 802.11a, Channel No.: 48



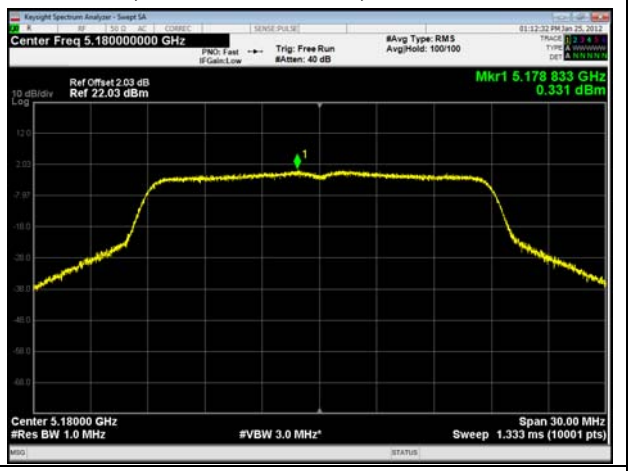
U-NII-1, 802.11n HT20, Channel No.: 48



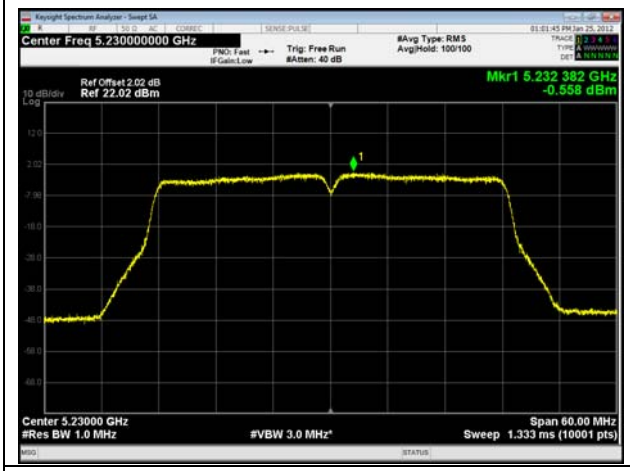
U-NII-1, 802.11n HT40, Channel No.: 38



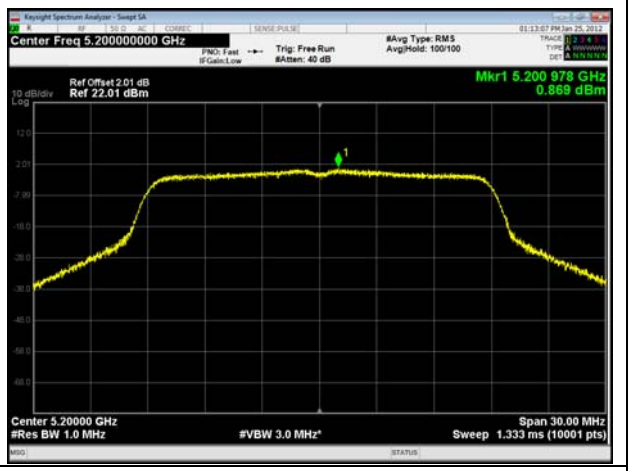
U-NII-1, 802.11ac VHT20, Channel No.: 36



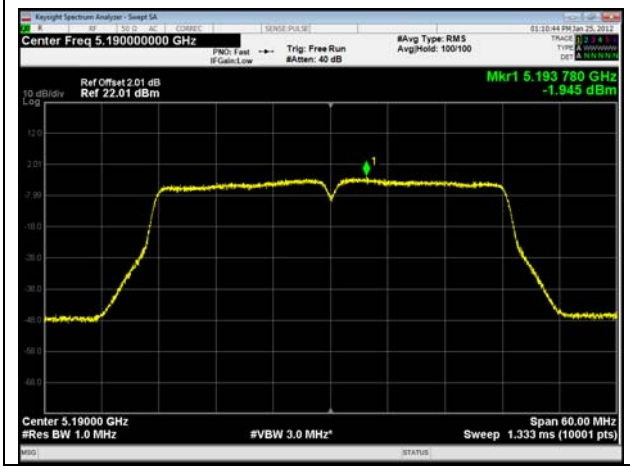
U-NII-1, 802.11n HT40, Channel No.: 46



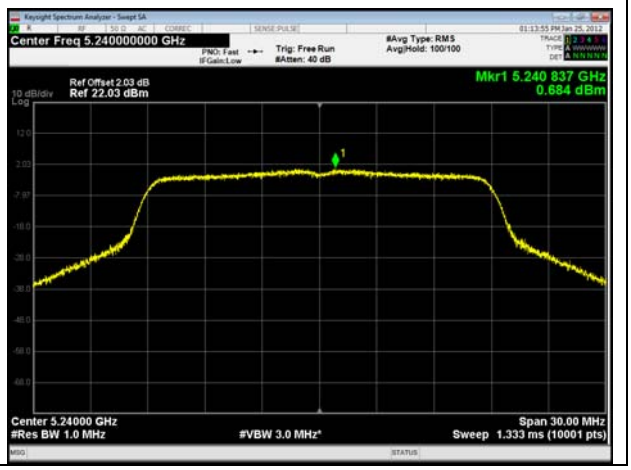
U-NII-1, 802.11ac VHT20, Channel No.: 40



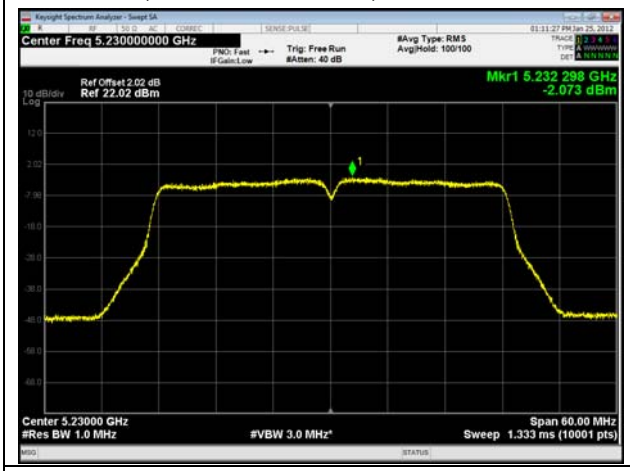
U-NII-1, 802.11ac VHT40, Channel No.: 38



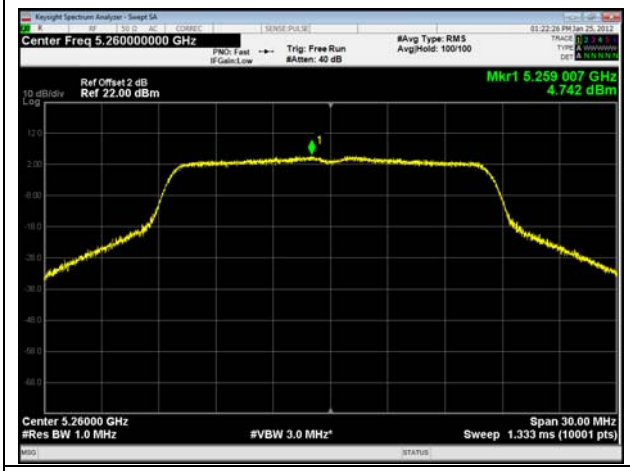
U-NII-1, 802.11ac VHT20, Channel No.: 48



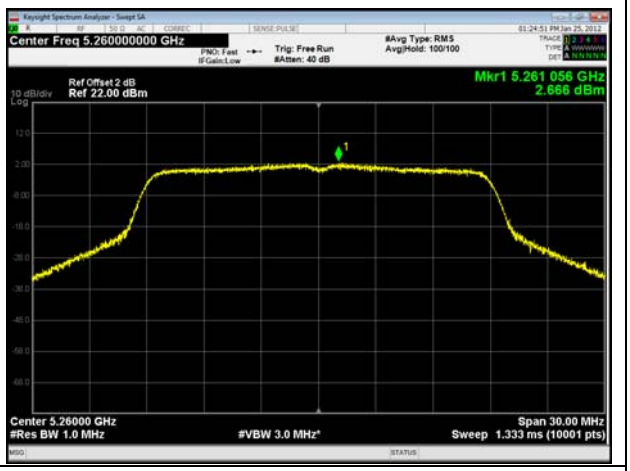
U-NII-1, 802.11ac VHT40, Channel No.: 46



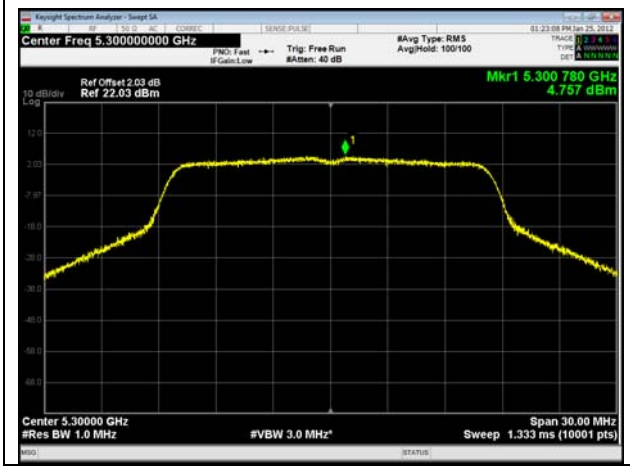
U-NII-2A, 802.11a, Channel No.: 52



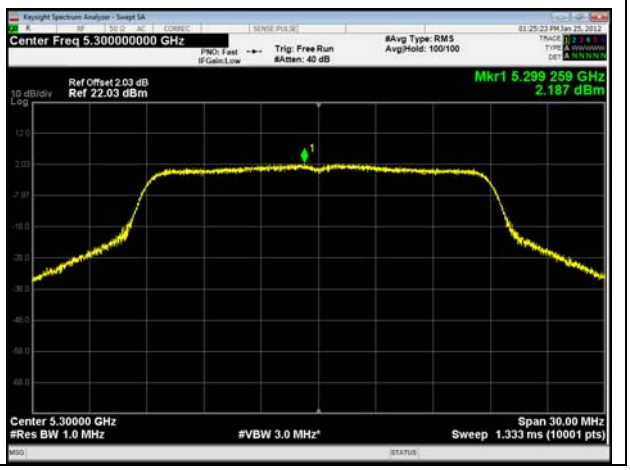
U-NII-2A, 802.11n HT20, Channel No.: 52



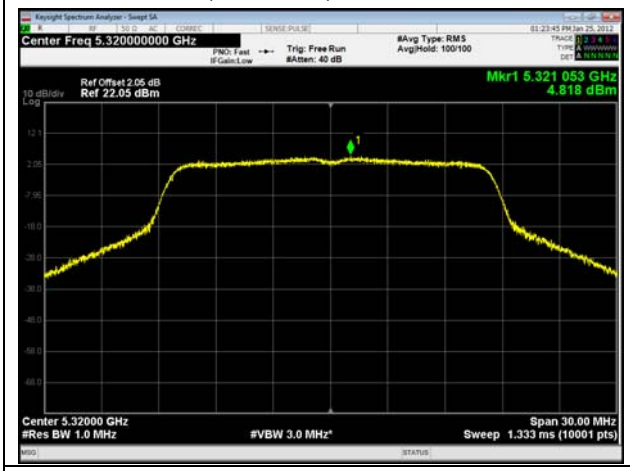
U-NII-2A, 802.11a, Channel No.: 60



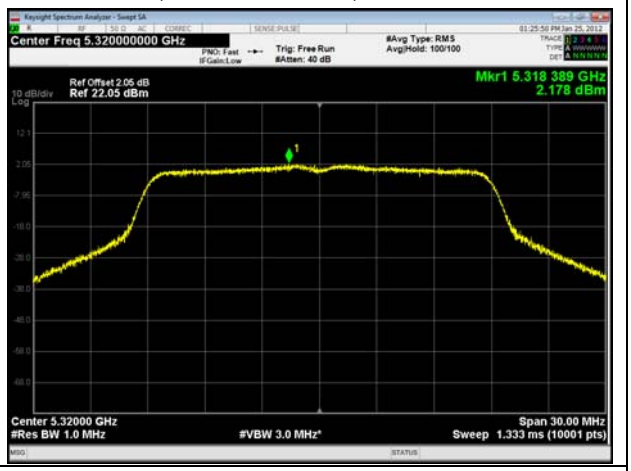
U-NII-2A, 802.11n HT20, Channel No.: 60



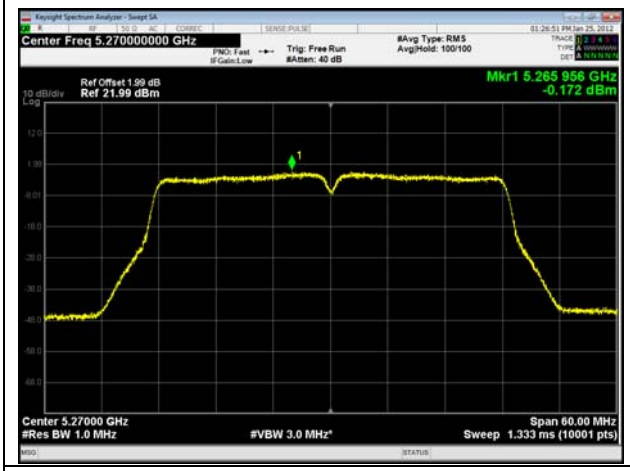
U-NII-2A, 802.11a, Channel No.: 64



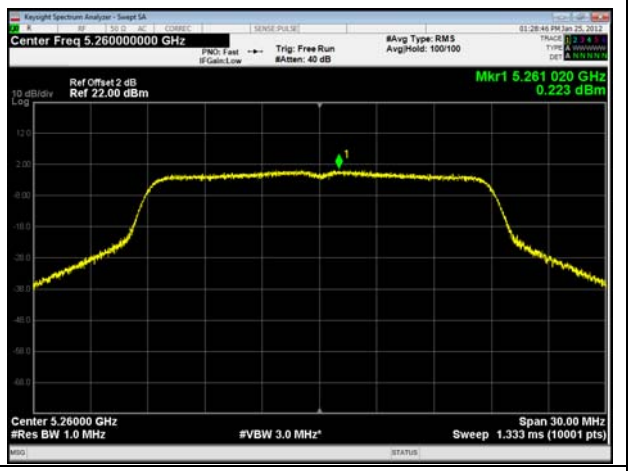
U-NII-2A, 802.11n HT20, Channel No.: 64



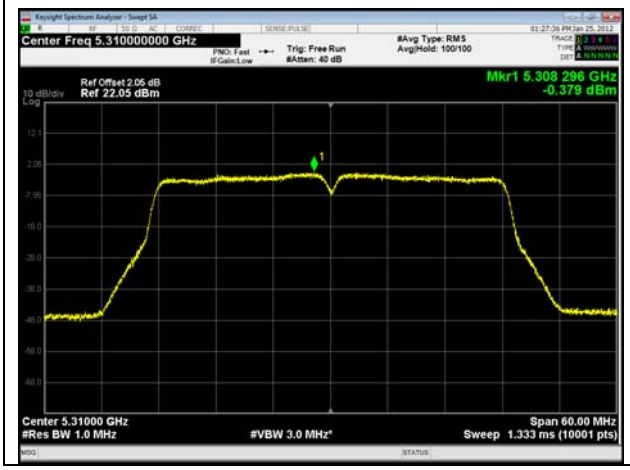
U-NII-2A, 802.11n HT40, Channel No.: 54



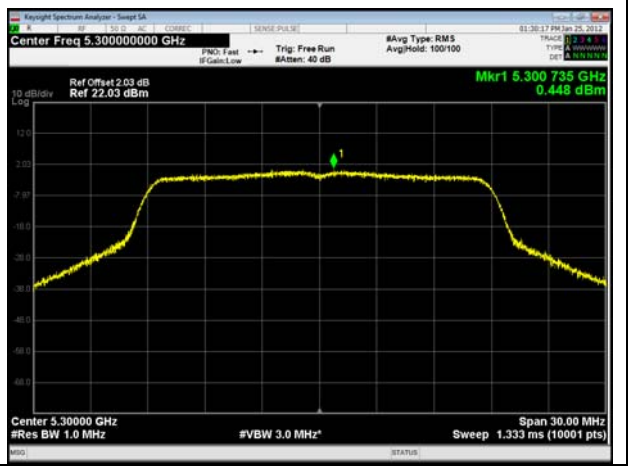
U-NII-2A, 802.11ac VHT20, Channel No.:52



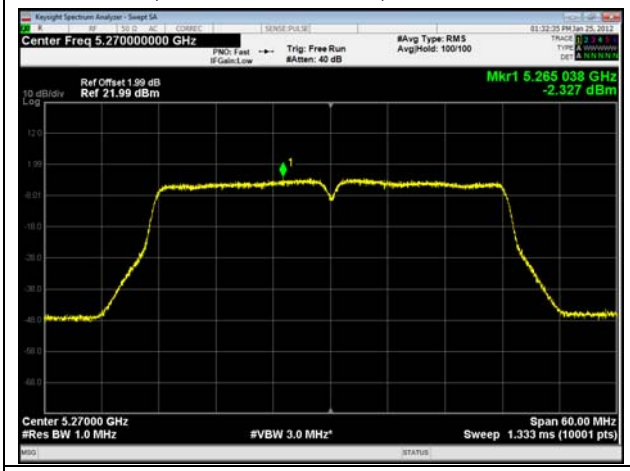
U-NII-2A, 802.11n HT40, Channel No.: 62



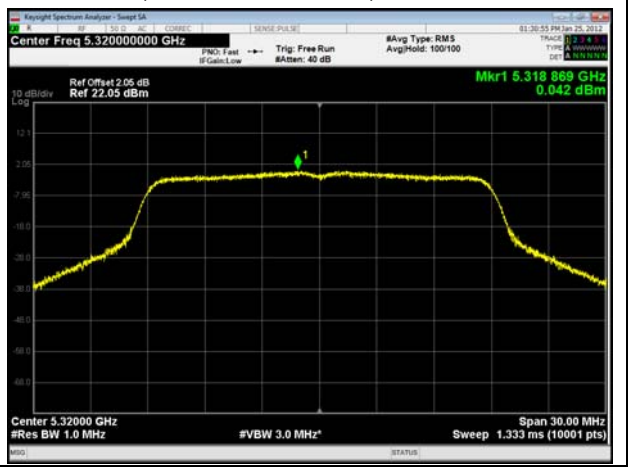
U-NII-2A, 802.11ac VHT20, Channel No.: 60



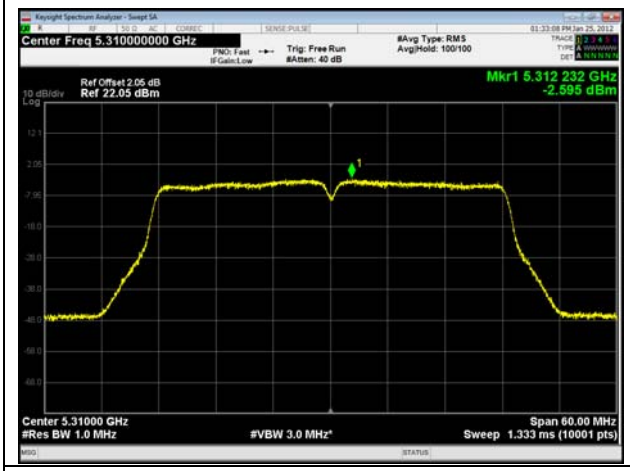
U-NII-2A, 802.11ac VHT40, Channel No.: 54



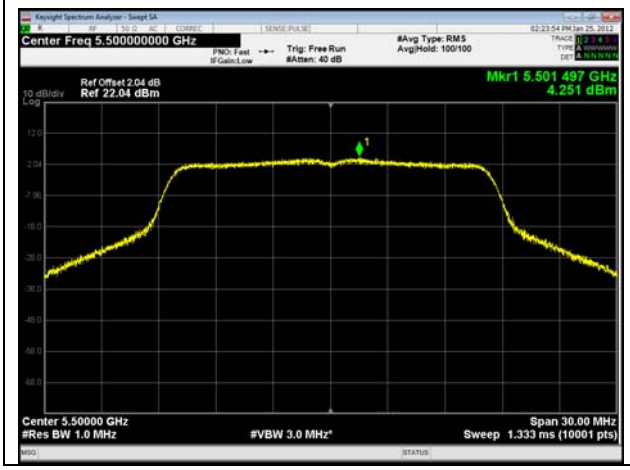
U-NII-2A, 802.11ac VHT20, Channel No.: 64



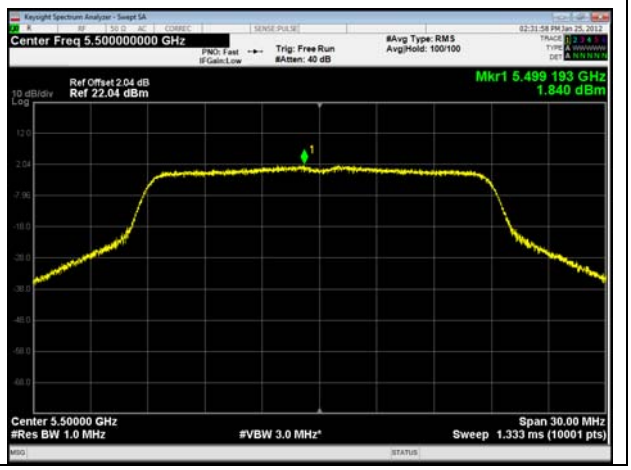
U-NII-2A, 802.11ac VHT40, Channel No.: 62



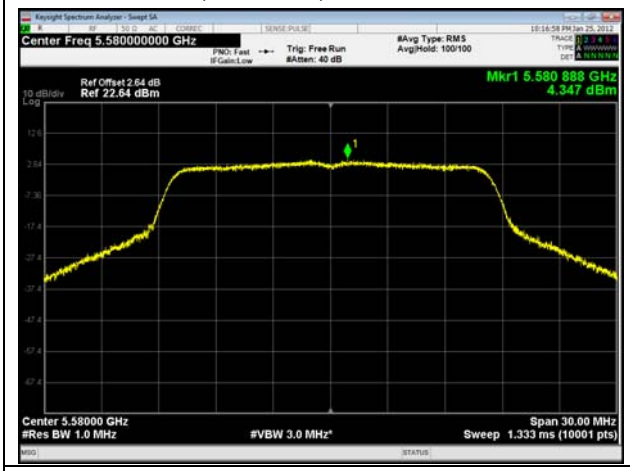
U-NII-2C, 802.11a, Channel No.: 100



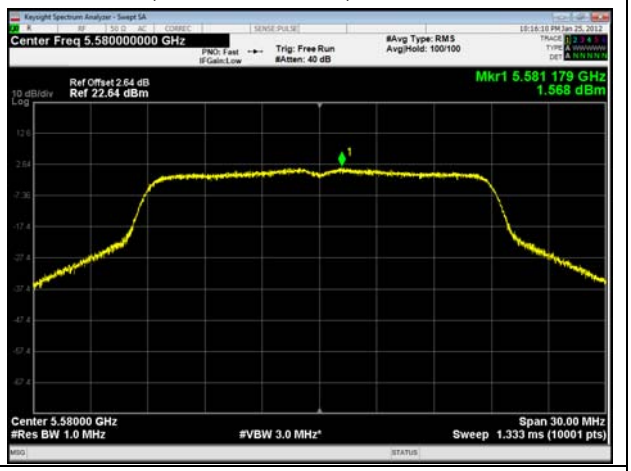
U-NII-2C, 802.11n HT20, Channel No.: 100



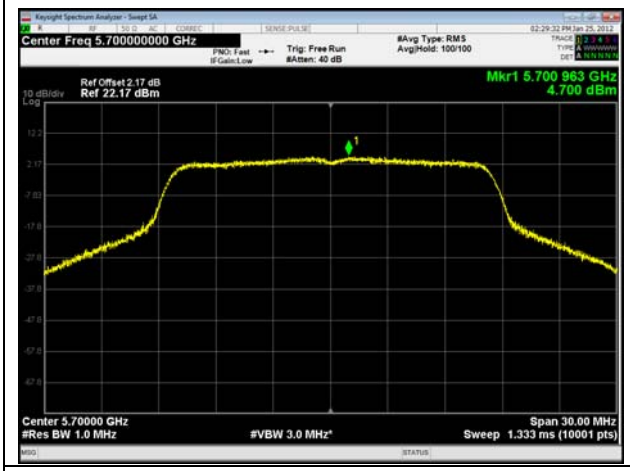
U-NII-2C, 802.11a, Channel No.: 116



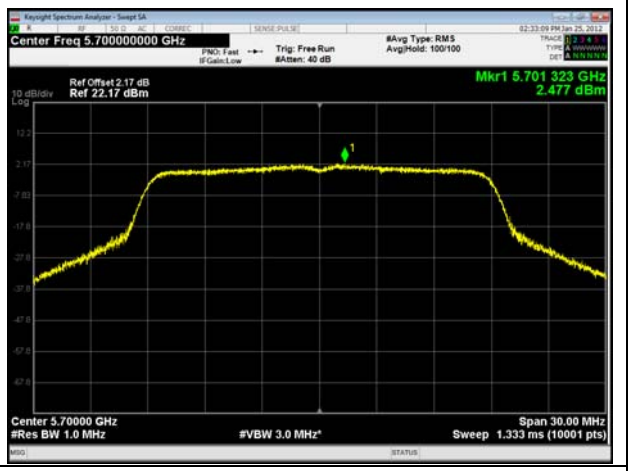
U-NII-2C, 802.11n HT20, Channel No.: 116



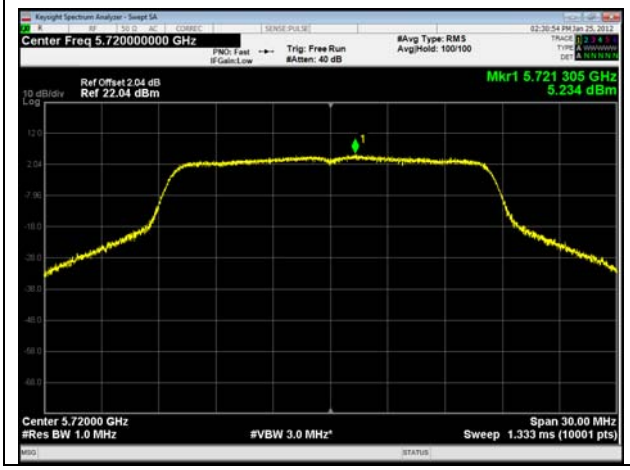
U-NII-2C, 802.11a, Channel No.: 140



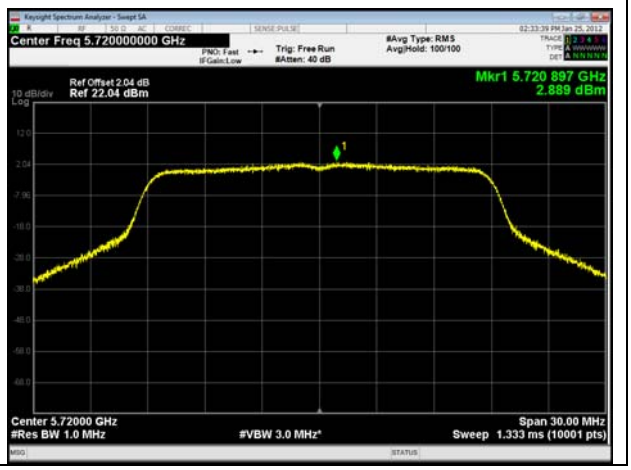
U-NII-2C, 802.11n HT20, Channel No.: 140



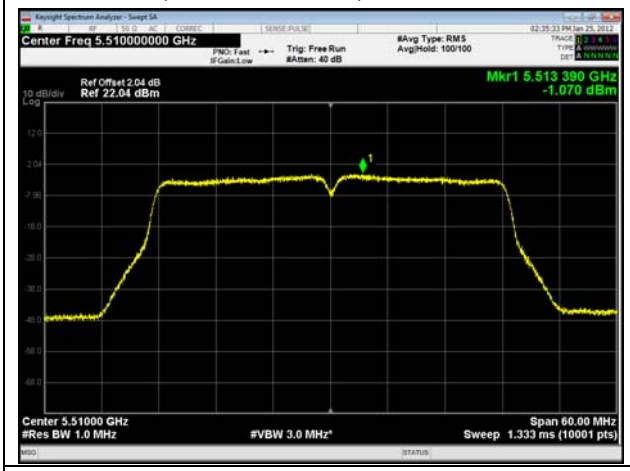
U-NII-2C, 802.11a, Channel No.: 144



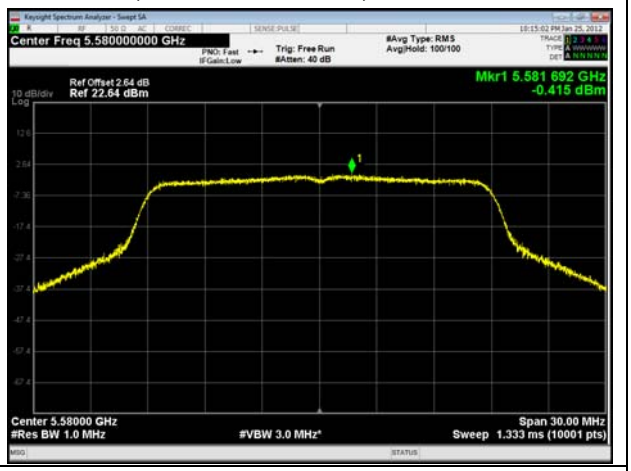
U-NII-2C, 802.11n HT20, Channel No.: 144



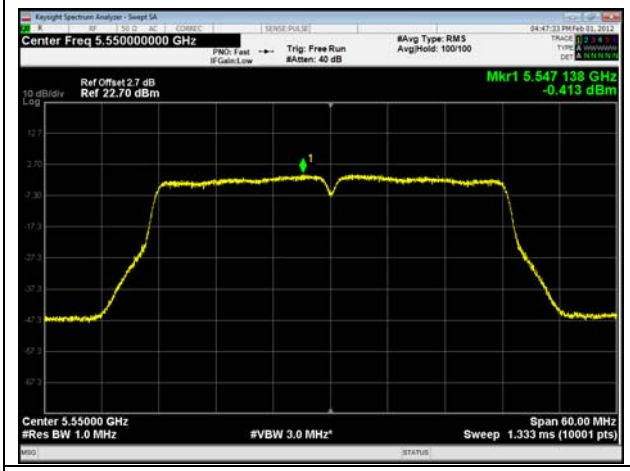
U-NII-2C, 802.11n HT40, Channel No.: 102



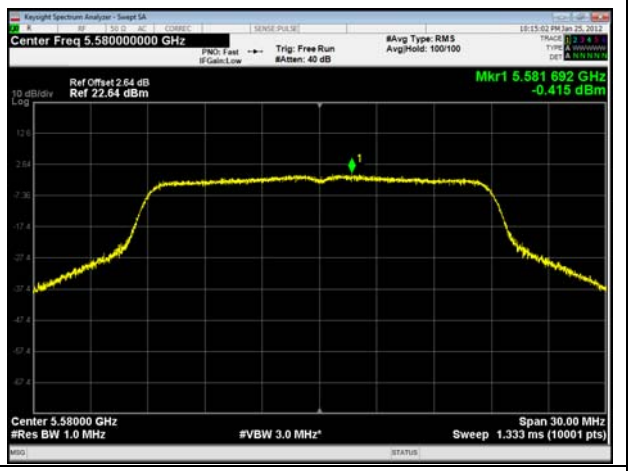
U-NII-2C, 802.11ac VHT20, Channel No.: 100



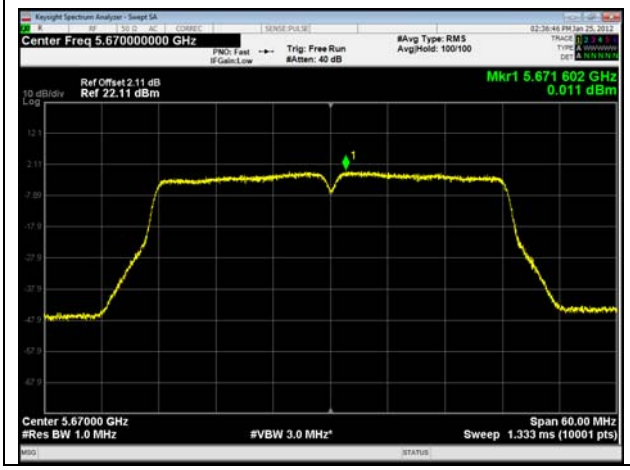
U-NII-2C, 802.11n HT40, Channel No.: 110



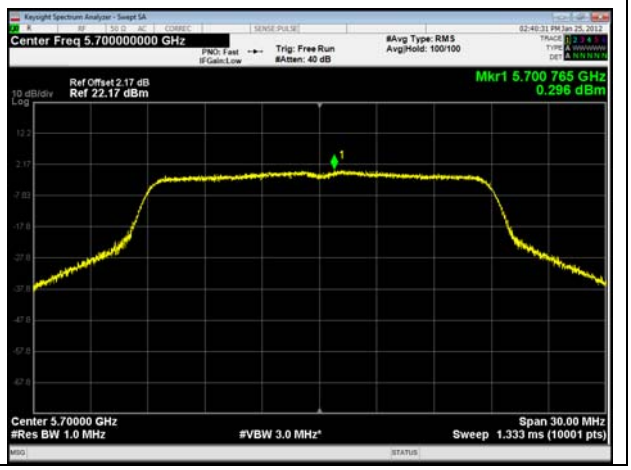
U-NII-2C, 802.11ac VHT20, Channel No.: 116



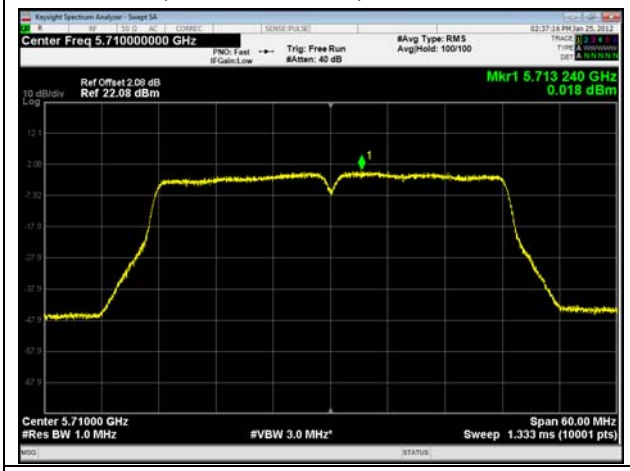
U-NII-2C, 802.11n HT40, Channel No.: 134



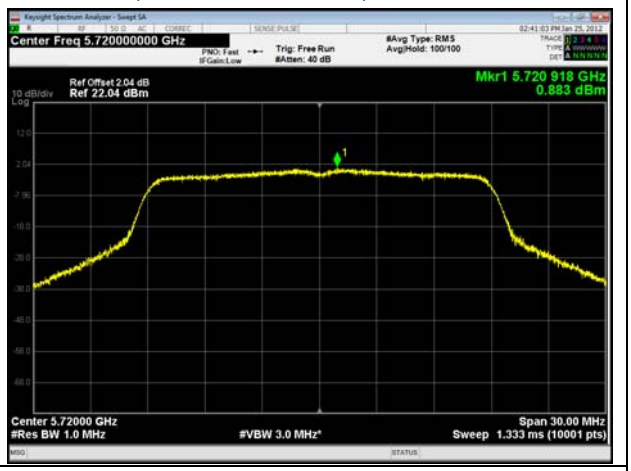
U-NII-2C, 802.11ac VHT20, Channel No.: 140



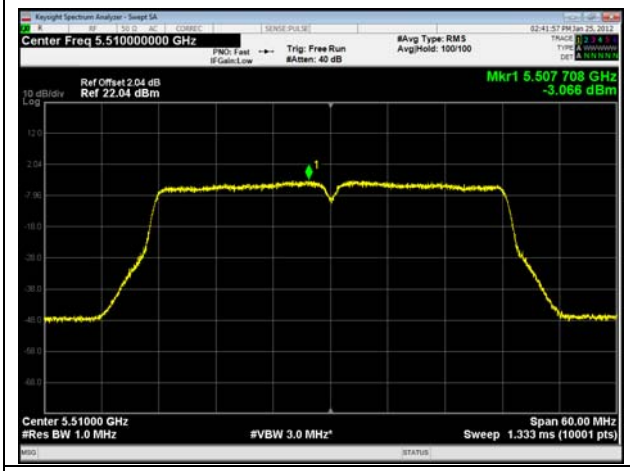
U-NII-2C, 802.11n HT40, Channel No.: 142



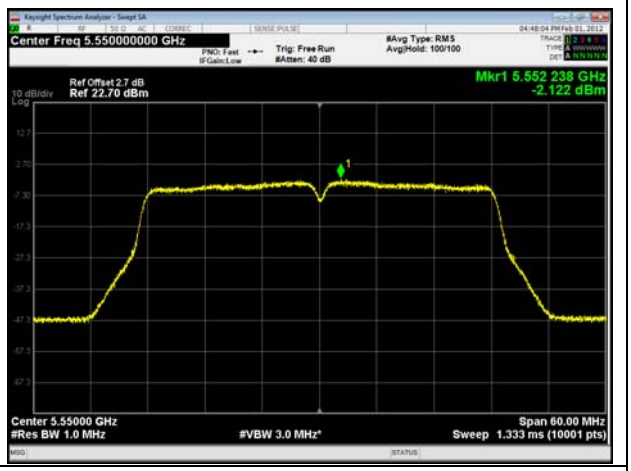
U-NII-2C, 802.11ac VHT20, Channel No.: 144



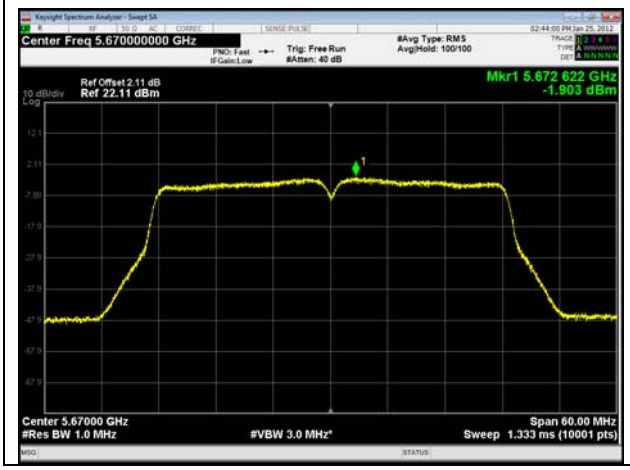
U-NII-2C, 802.11ac VHT40, Channel No.: 102



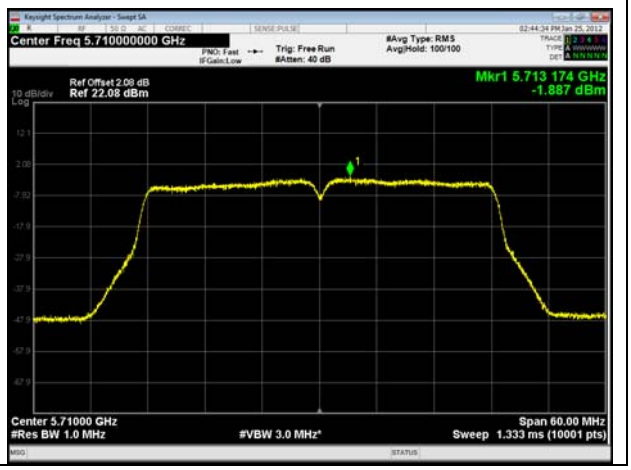
U-NII-2C, 802.11ac VHT40, Channel No.: 110



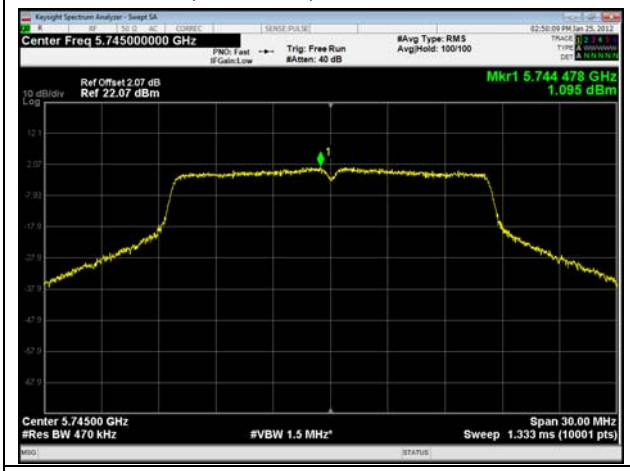
U-NII-2C, 802.11ac VHT40, Channel No.: 134



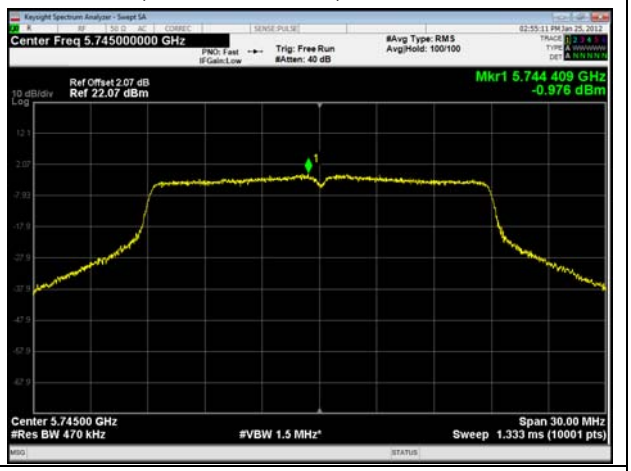
U-NII-2C, 802.11ac VHT40, Channel No.: 142



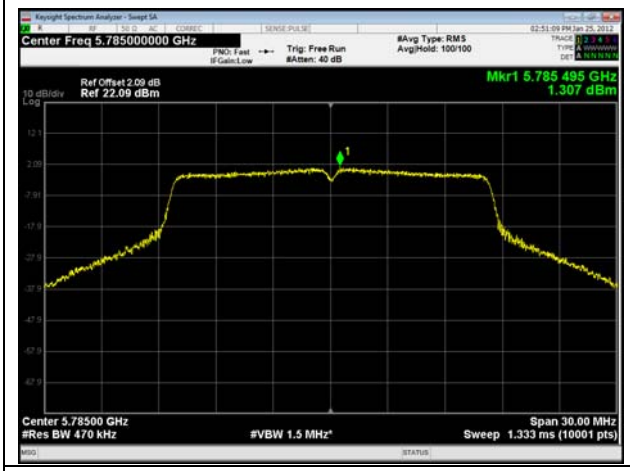
U-NII-3, 802.11a, Channel No.: 149



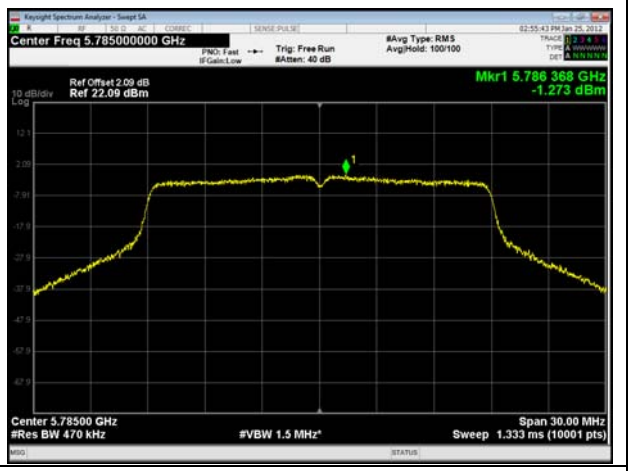
U-NII-3, 802.11n HT20, Channel No.: 149



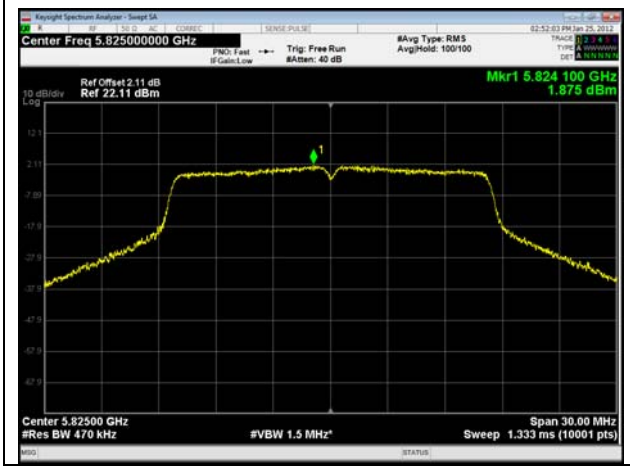
U-NII-3, 802.11a, Channel No.: 157



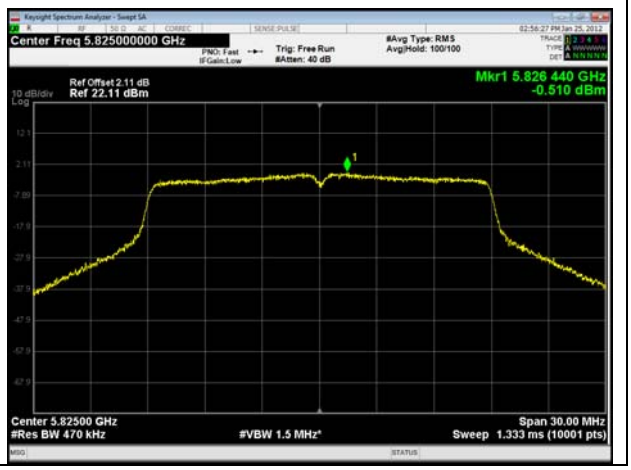
U-NII-3, 802.11n HT20, Channel No.: 157



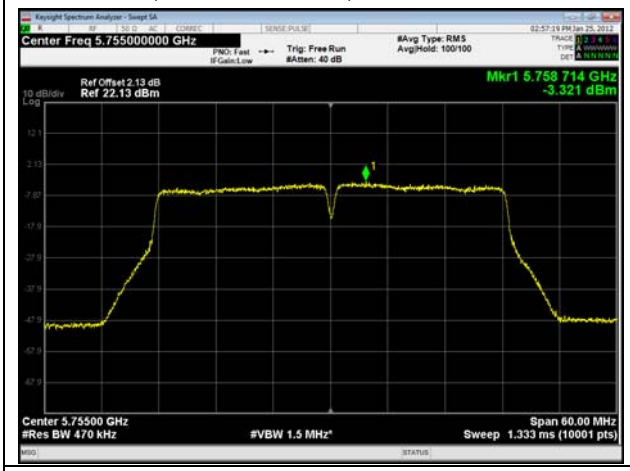
U-NII-3, 802.11a, Channel No.: 165



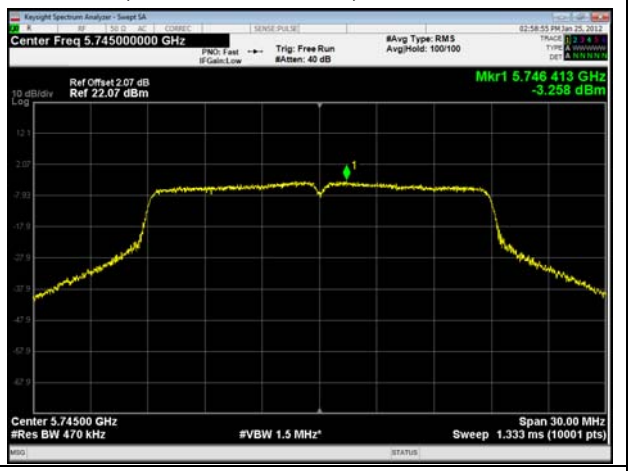
U-NII-3, 802.11n HT20, Channel No.: 165



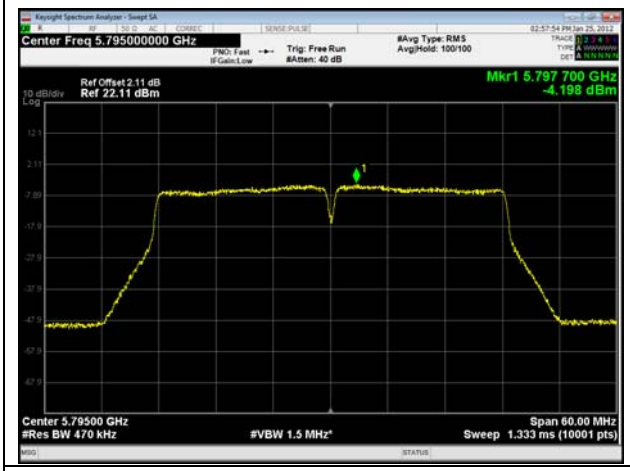
U-NII-3, 802.11n HT40, Channel No.: 151



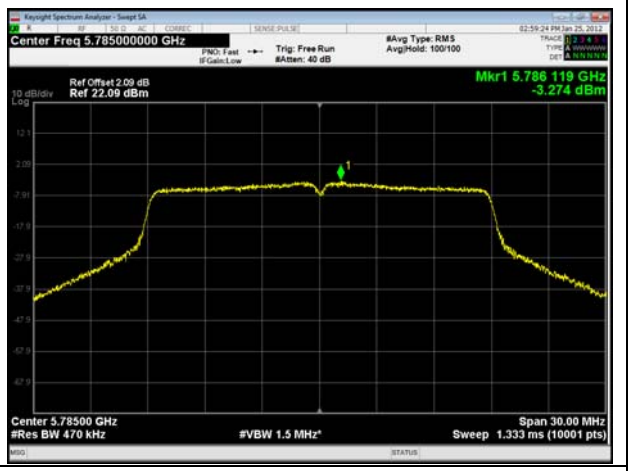
U-NII-3, 802.11ac VHT20, Channel No.: 149



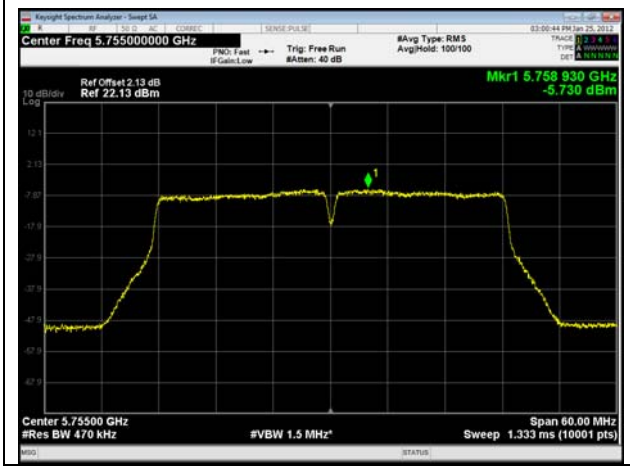
U-NII-3, 802.11n HT40, Channel No.: 159



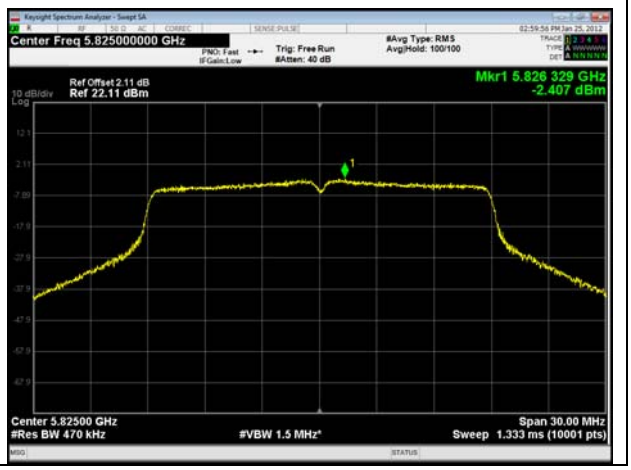
U-NII-3, 802.11ac VHT20, Channel No.: 157



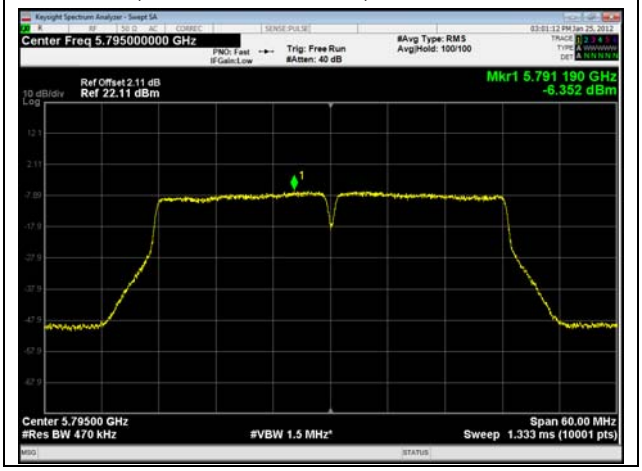
U-NII-3, 802.11ac VHT40, Channel No.: 151



U-NII-3, 802.11ac VHT20, Channel No.: 165

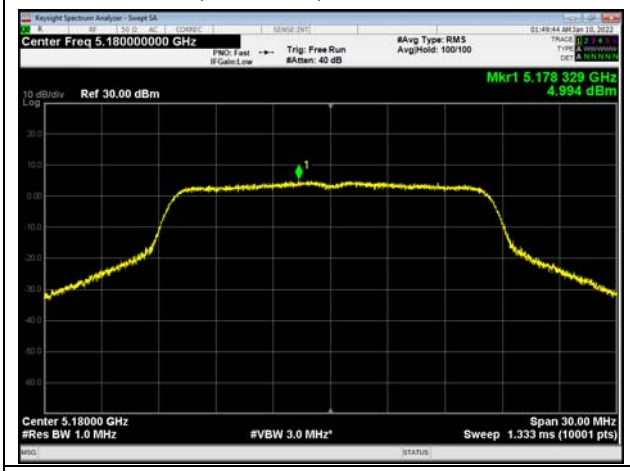


U-NII-3, 802.11ac VHT40, Channel No.: 159

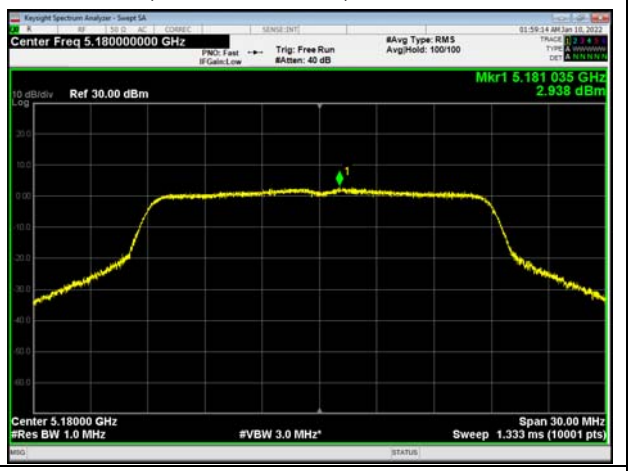


SISO Antenna 2

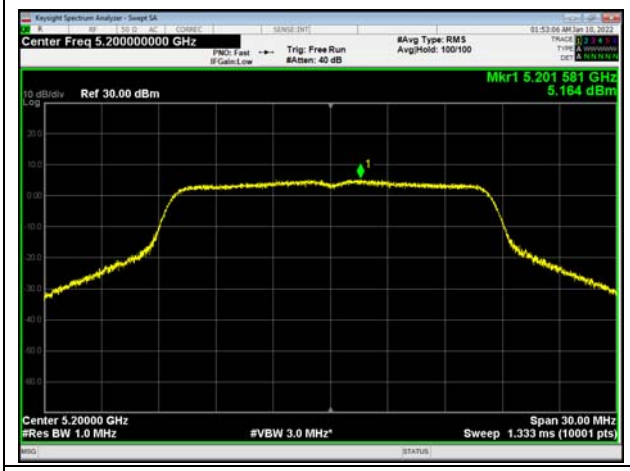
U-NII-1, 802.11a, Channel No.: 36



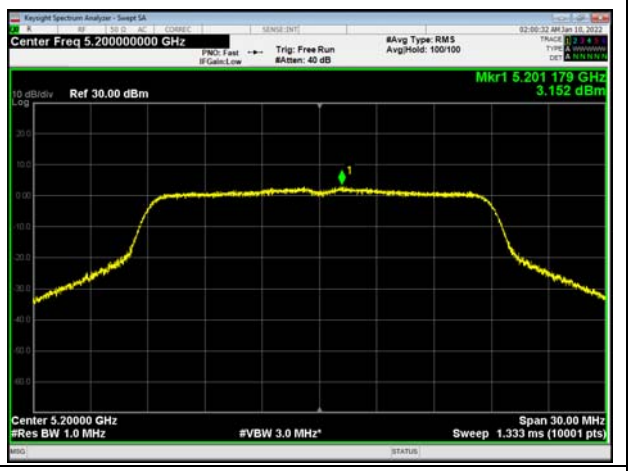
U-NII-1, 802.11n HT20, Channel No.: 36



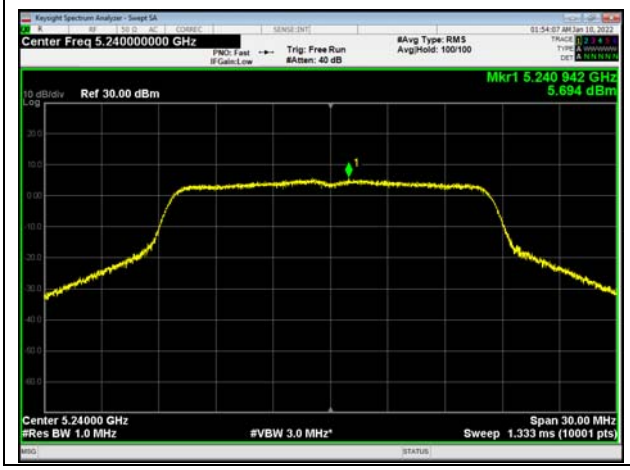
U-NII-1, 802.11a, Channel No.: 40



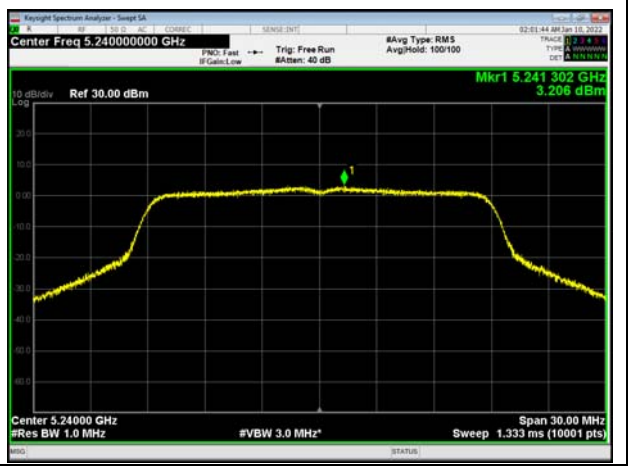
U-NII-1, 802.11n HT20, Channel No.: 40



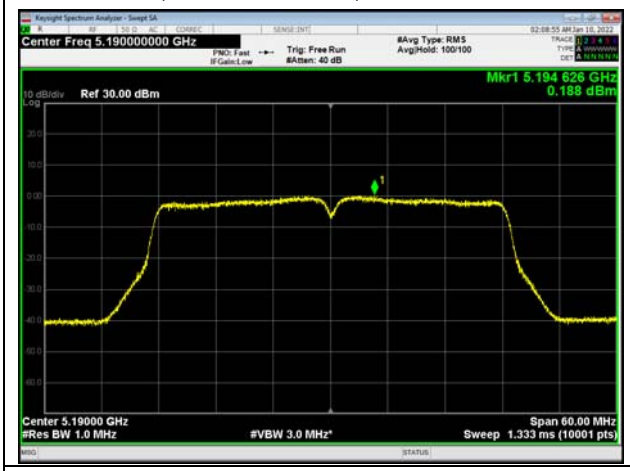
U-NII-1, 802.11a, Channel No.: 48



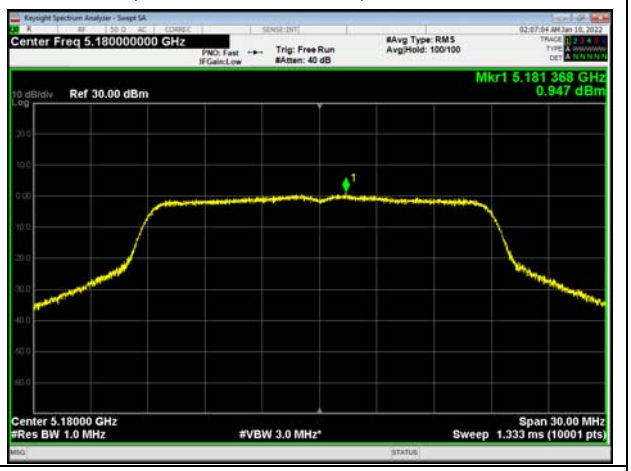
U-NII-1, 802.11n HT20, Channel No.: 48



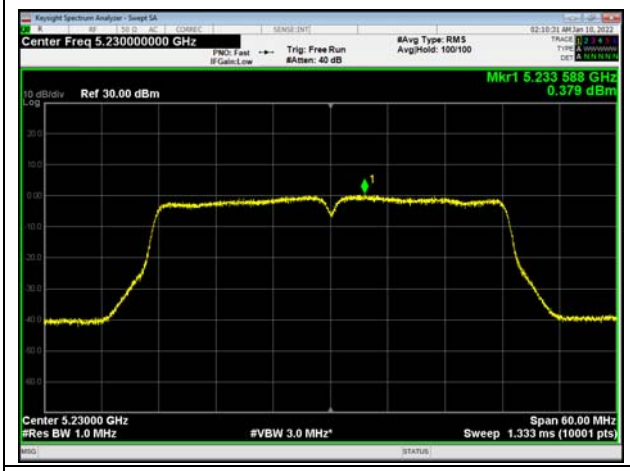
U-NII-1, 802.11n HT40, Channel No.: 38



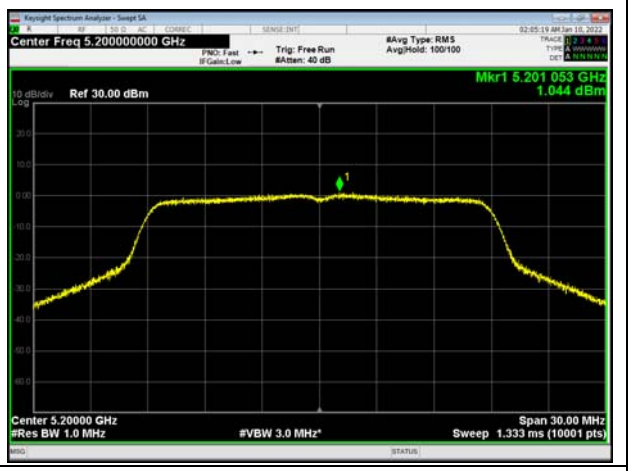
U-NII-1, 802.11ac VHT20, Channel No.: 36



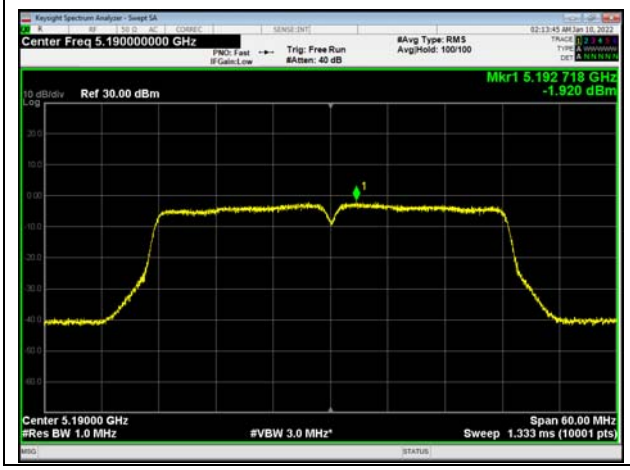
U-NII-1, 802.11n HT40, Channel No.: 46



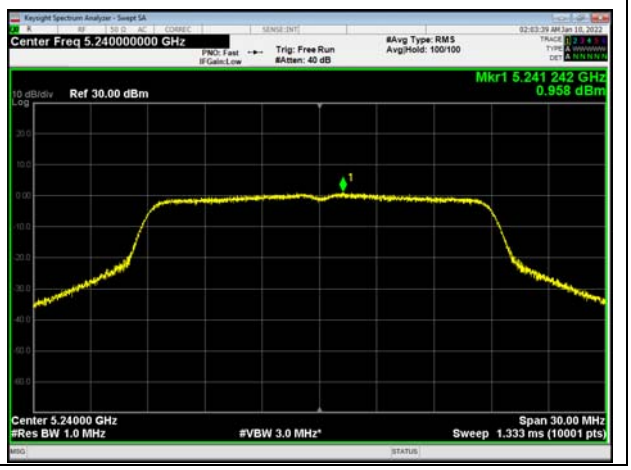
U-NII-1, 802.11ac VHT20, Channel No.: 40



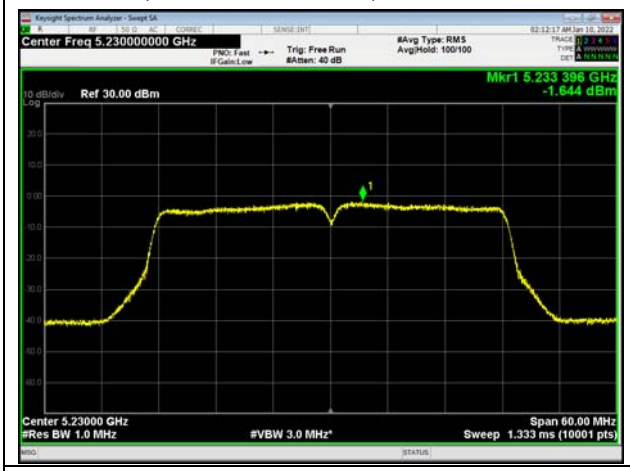
U-NII-1, 802.11ac VHT40, Channel No.: 38



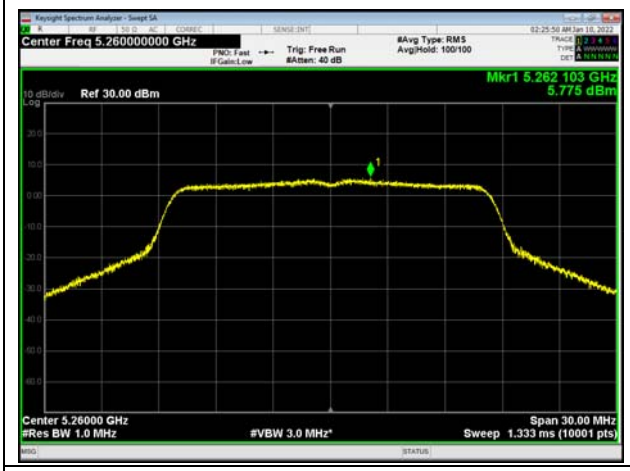
U-NII-1, 802.11ac VHT20, Channel No.: 48



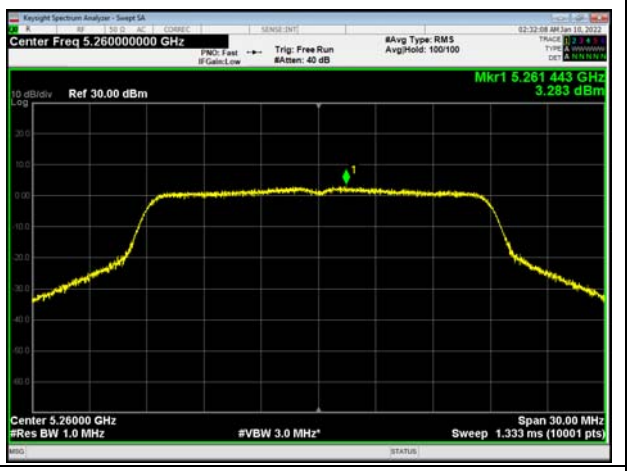
U-NII-1, 802.11ac VHT40, Channel No.: 46



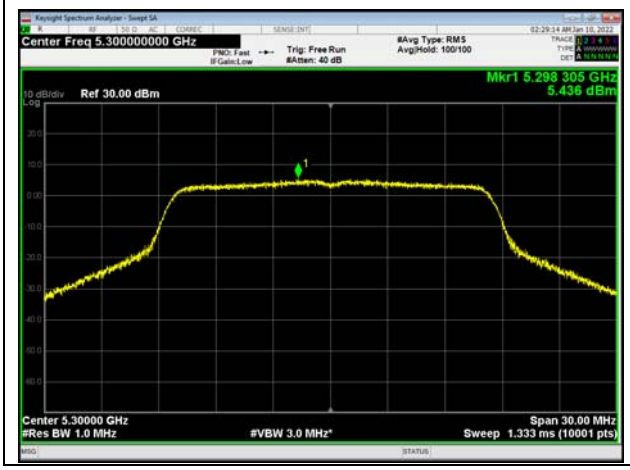
U-NII-2A, 802.11a, Channel No.: 52



U-NII-2A, 802.11n HT20, Channel No.: 52

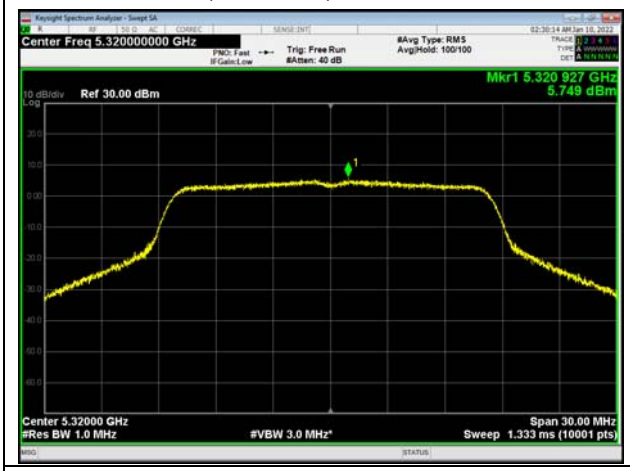


U-NII-2A, 802.11a, Channel No.: 60



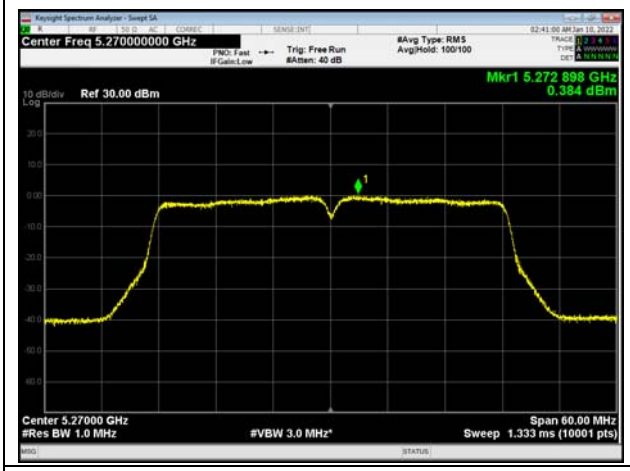
U-NII-2A, 802.11n HT20, Channel No.: 60

U-NII-2A, 802.11a, Channel No.: 64

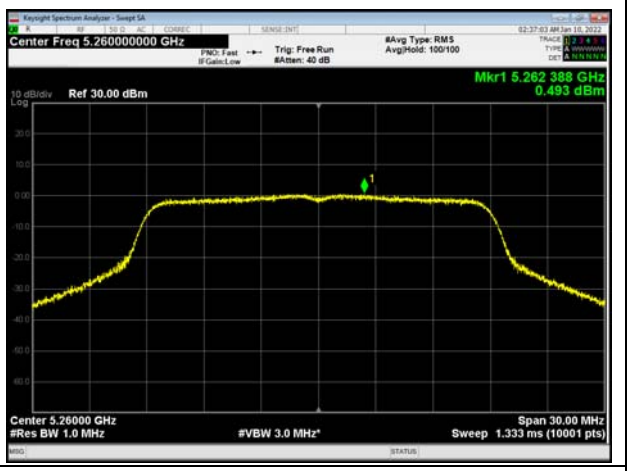


U-NII-2A, 802.11n HT20, Channel No.: 64

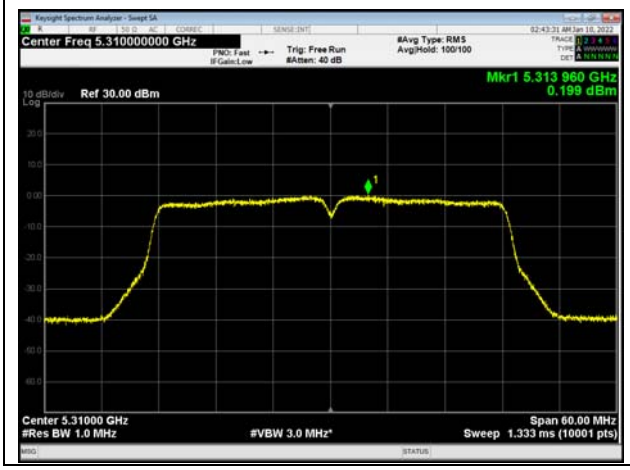
U-NII-2A, 802.11n HT40, Channel No.: 54



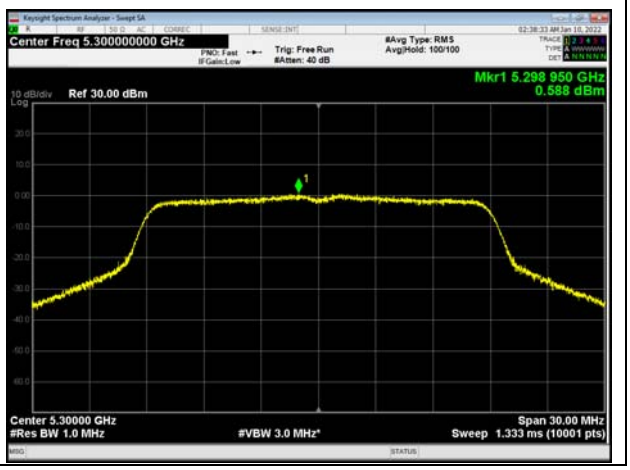
U-NII-2A, 802.11ac VHT20, Channel No.:52



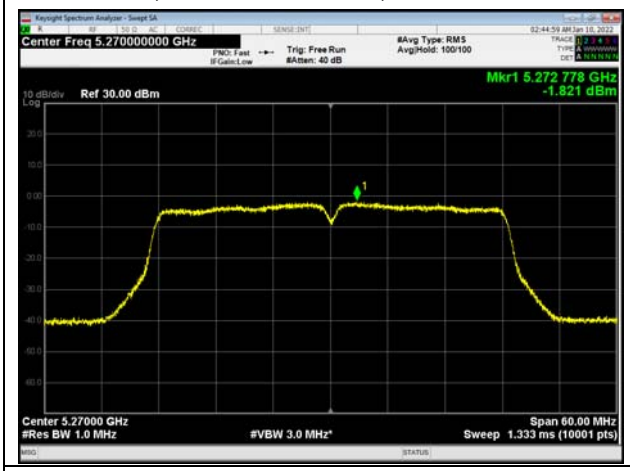
U-NII-2A, 802.11n HT40, Channel No.: 62



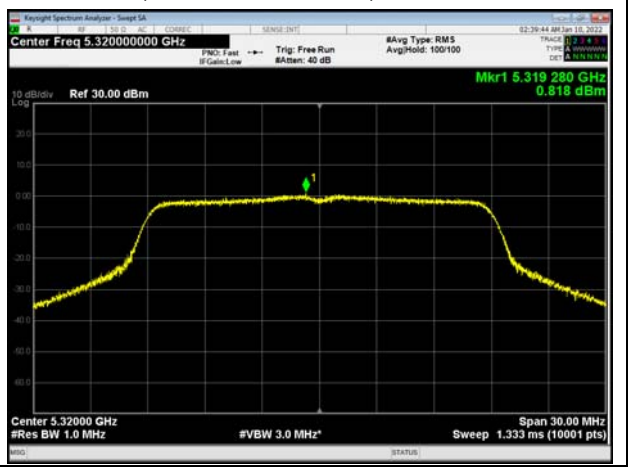
U-NII-2A, 802.11ac VHT20, Channel No.: 60



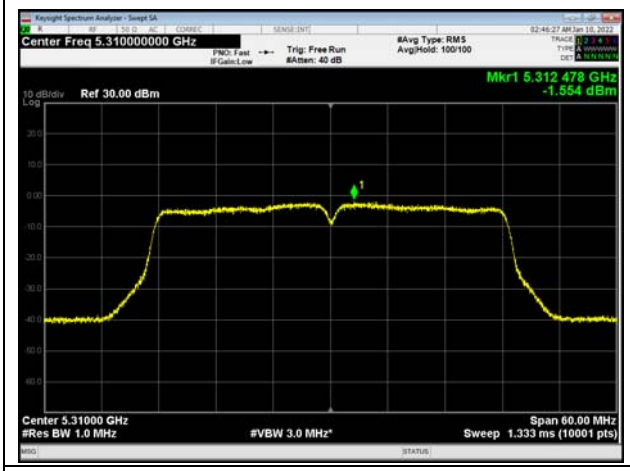
U-NII-2A, 802.11ac VHT40, Channel No.: 54



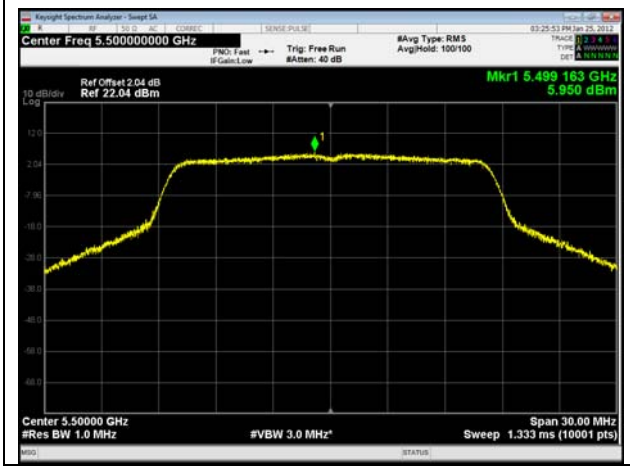
U-NII-2A, 802.11ac VHT20, Channel No.: 64



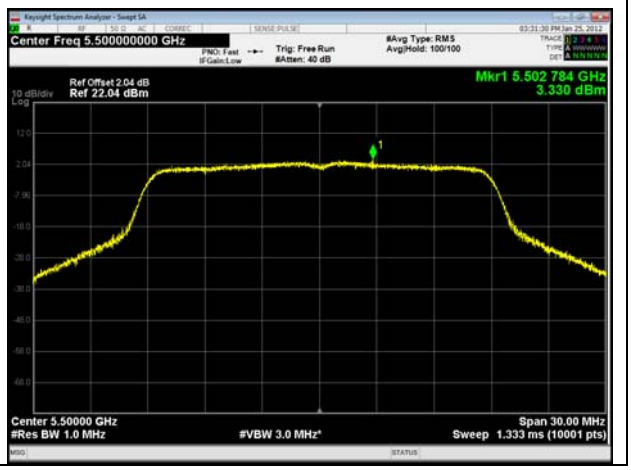
U-NII-2A, 802.11ac VHT40, Channel No.: 62



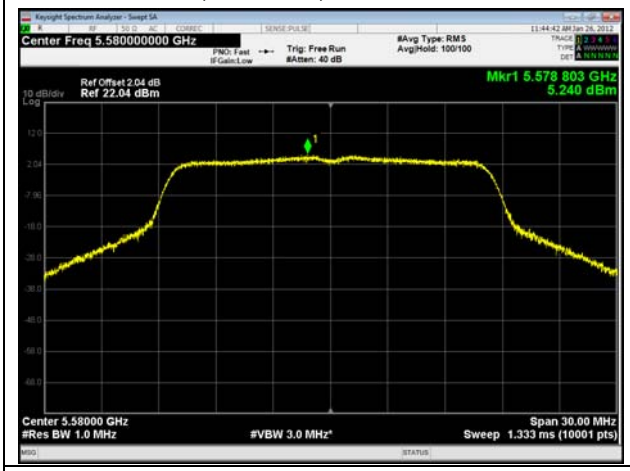
U-NII-2C, 802.11a, Channel No.: 100



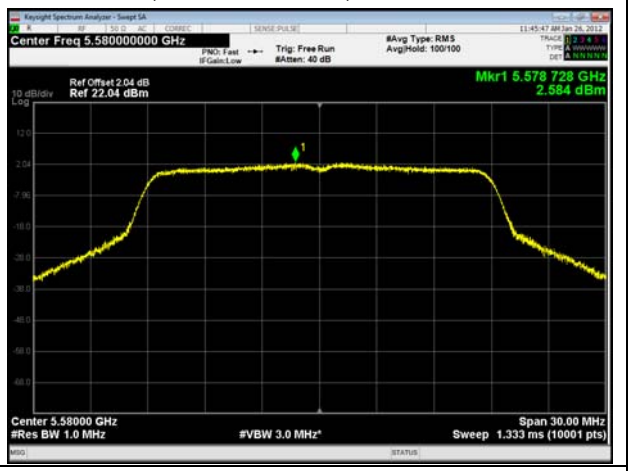
U-NII-2C, 802.11n HT20, Channel No.: 100



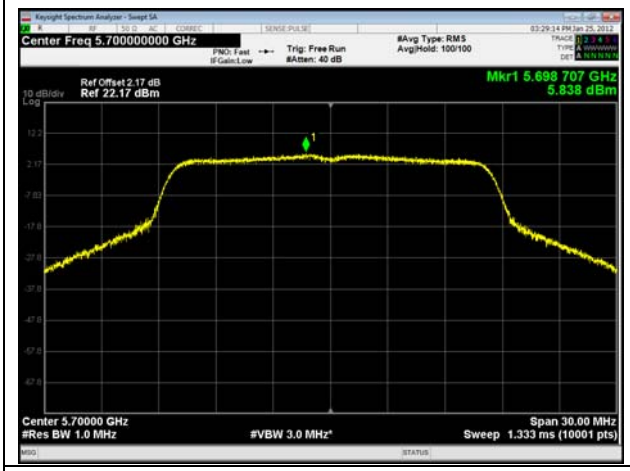
U-NII-2C, 802.11a, Channel No.: 116



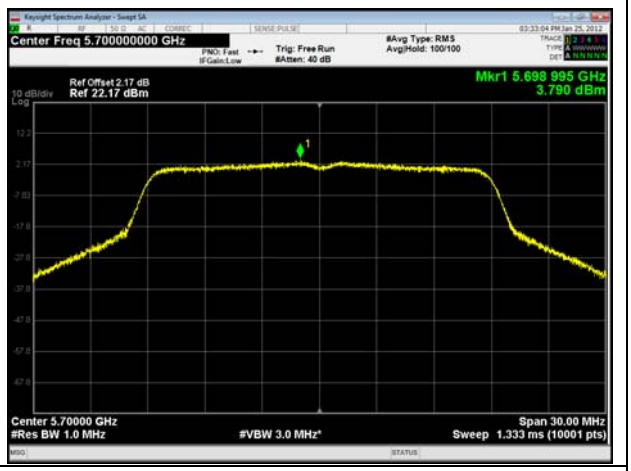
U-NII-2C, 802.11n HT20, Channel No.: 116



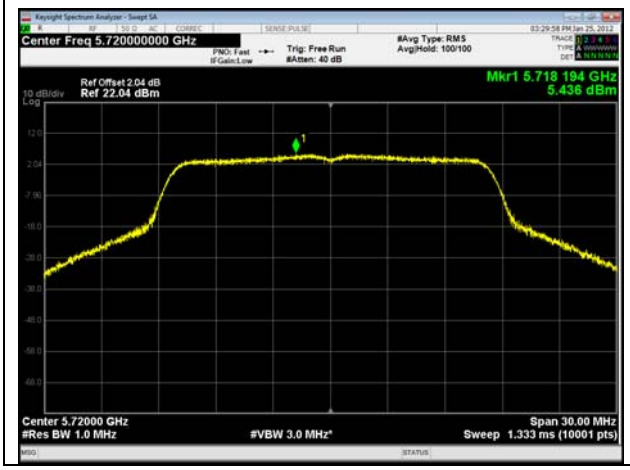
U-NII-2C, 802.11a, Channel No.: 140



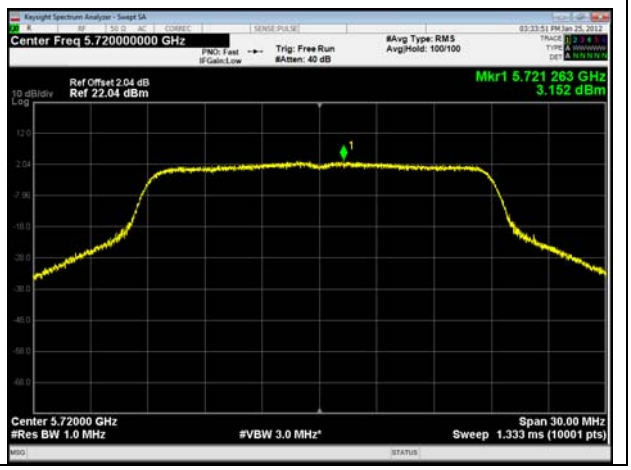
U-NII-2C, 802.11n HT20, Channel No.: 140



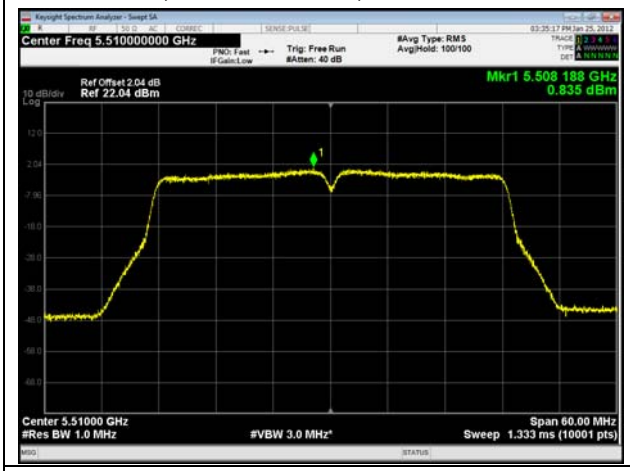
U-NII-2C, 802.11a, Channel No.: 144



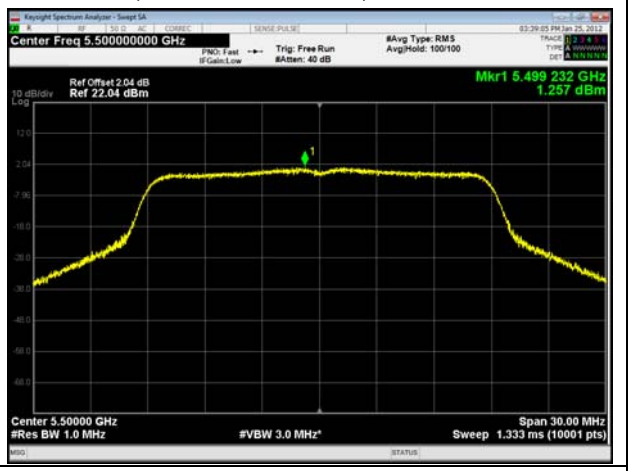
U-NII-2C, 802.11n HT20, Channel No.: 144



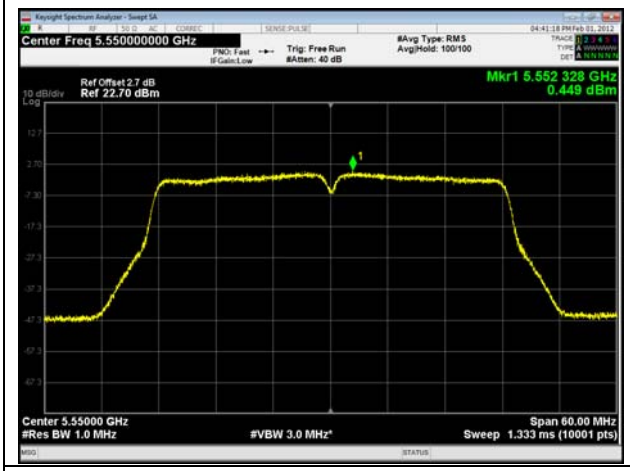
U-NII-2C, 802.11n HT40, Channel No.: 102



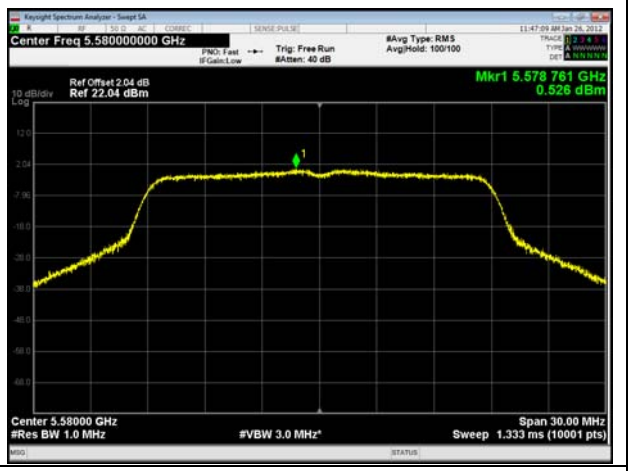
U-NII-2C, 802.11ac VHT20, Channel No.: 100



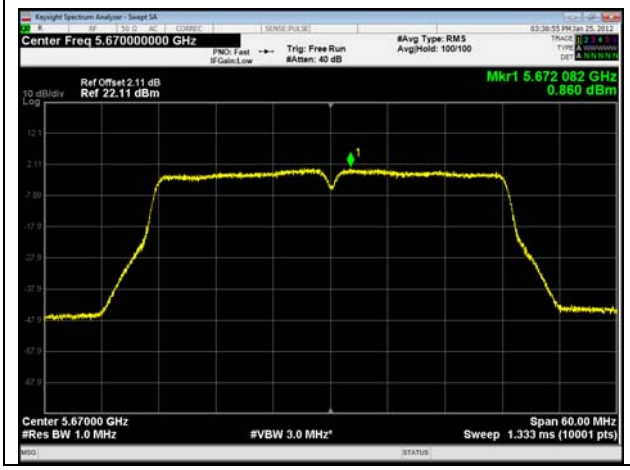
U-NII-2C, 802.11n HT40, Channel No.: 110



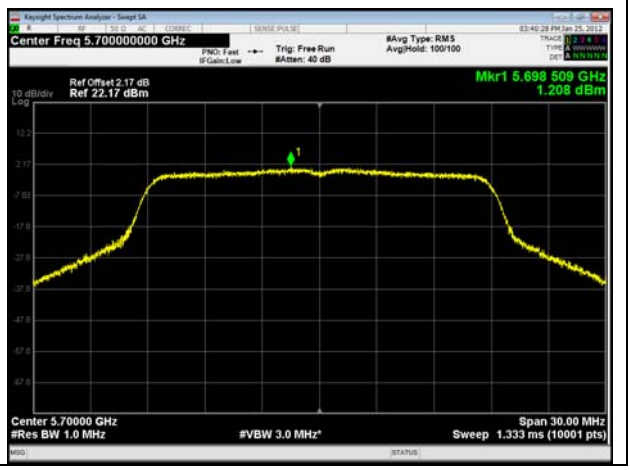
U-NII-2C, 802.11ac VHT20, Channel No.: 116



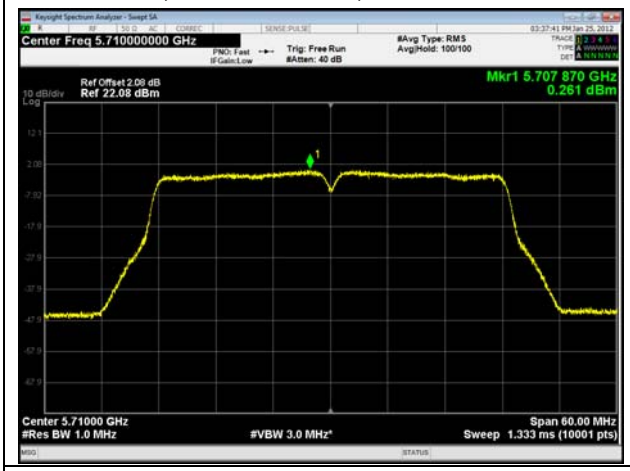
U-NII-2C, 802.11n HT40, Channel No.: 134



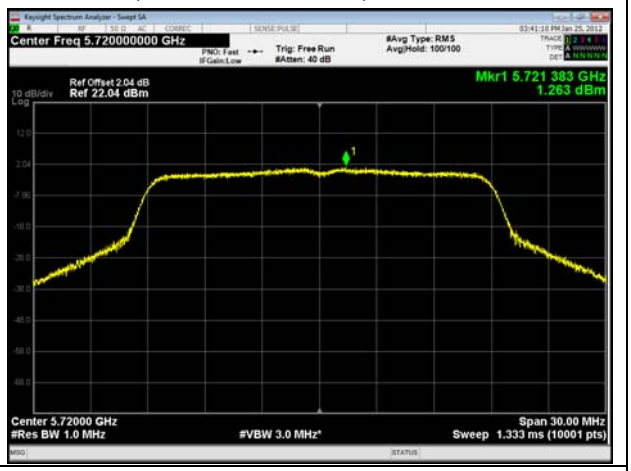
U-NII-2C, 802.11ac VHT20, Channel No.: 140



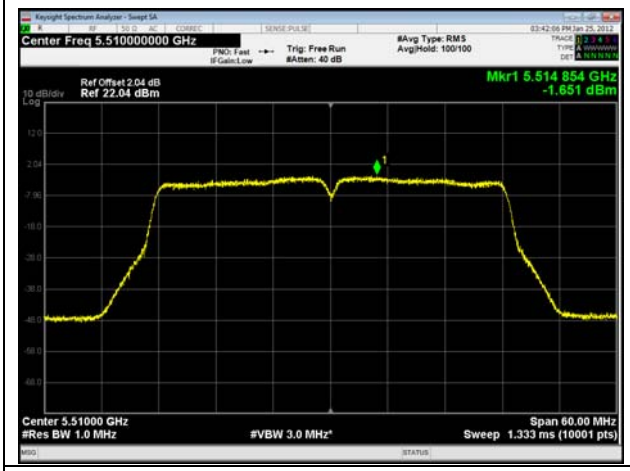
U-NII-2C, 802.11n HT40, Channel No.: 142



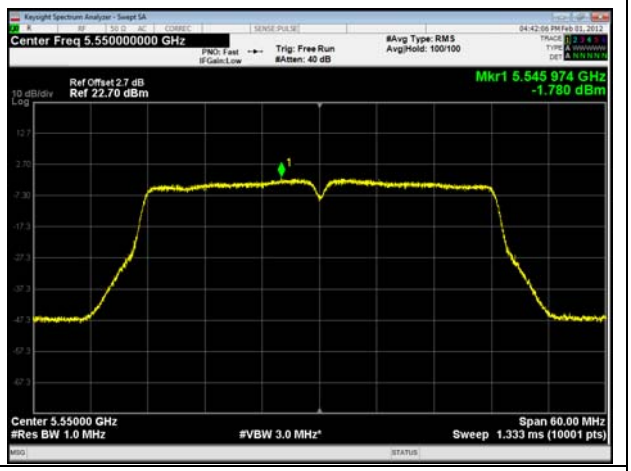
U-NII-2C, 802.11ac VHT20, Channel No.: 144



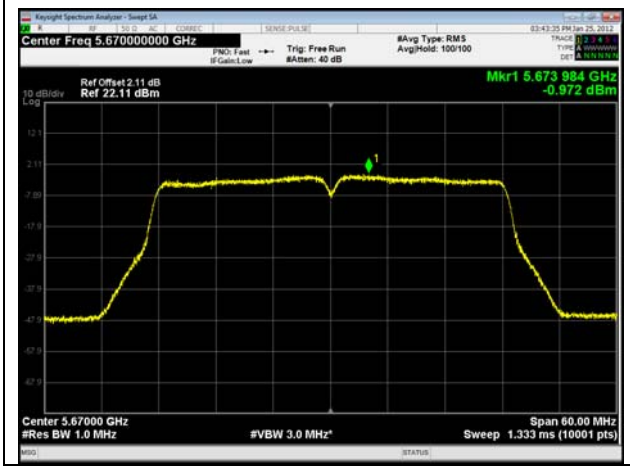
U-NII-2C, 802.11ac VHT40, Channel No.: 102



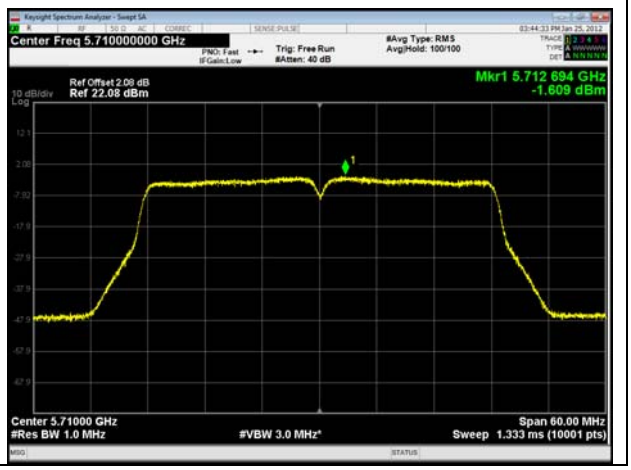
U-NII-2C, 802.11ac VHT40, Channel No.: 110



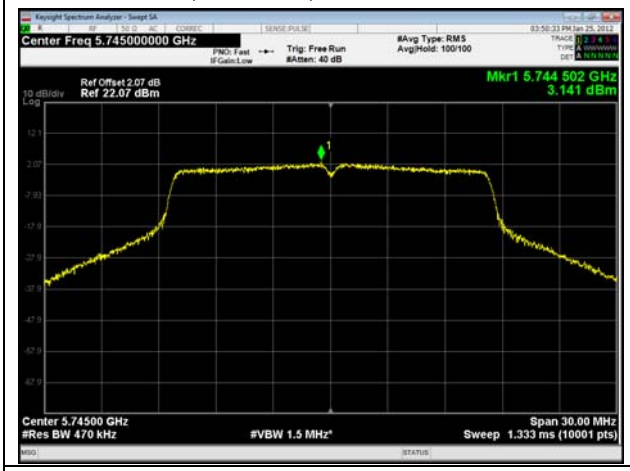
U-NII-2C, 802.11ac VHT40, Channel No.: 134



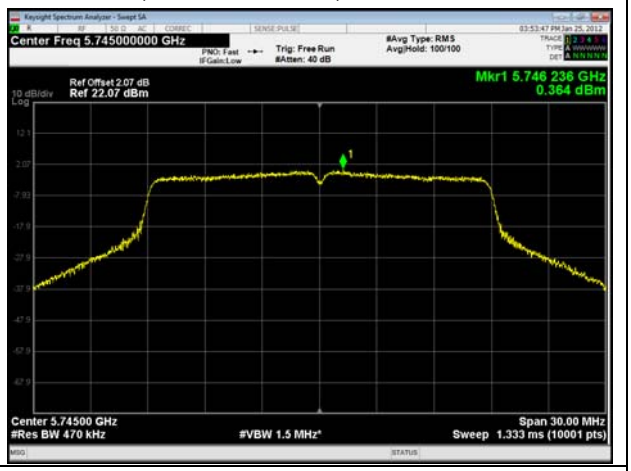
U-NII-2C, 802.11ac VHT40, Channel No.: 142



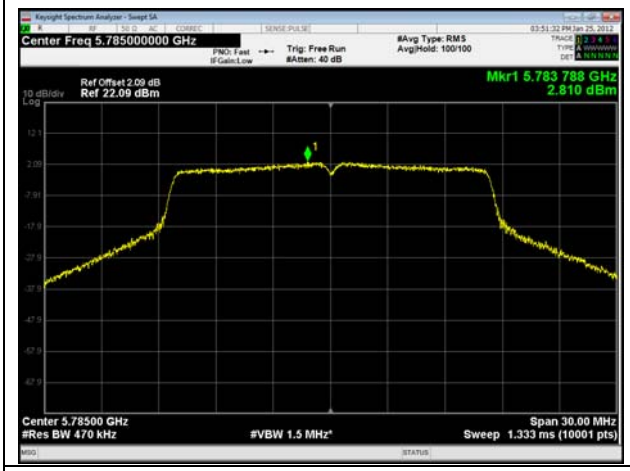
U-NII-3, 802.11a, Channel No.: 149



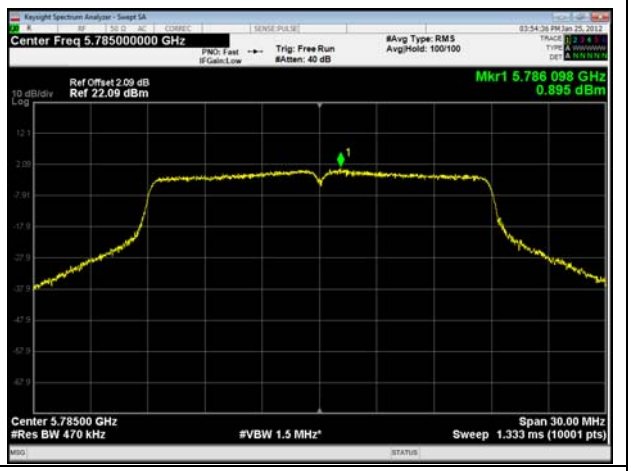
U-NII-3, 802.11n HT20, Channel No.: 149



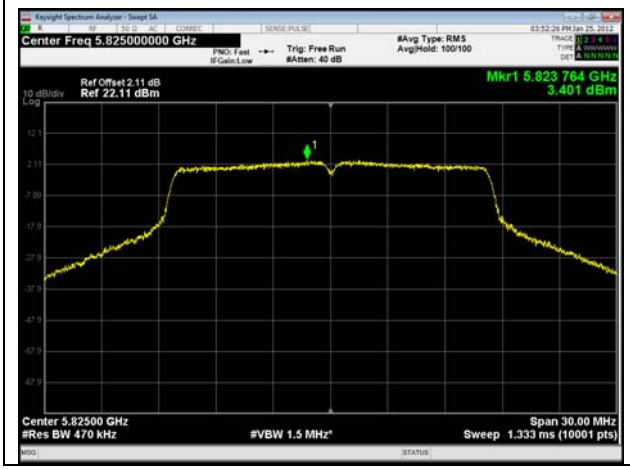
U-NII-3, 802.11a, Channel No.: 157



U-NII-3, 802.11n HT20, Channel No.: 157



U-NII-3, 802.11a, Channel No.: 165



U-NII-3, 802.11n HT20, Channel No.: 165